# A Study of Quality of Dental Care Service Factors Influencing Patient Satisfaction, Trust and Loyalty in Yangon, Myanmar

# **Eileen Htang**

A Thesis Submitted in Partial Fulfilment of the Requirements

For the Degree of Master of Business Administration

International School of Management

University of the Thai Chamber of Commerce

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# THESIS APPROVAL INTERNATIONAL SCHOOL OF MANAGEMENT

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#### **ABSTRACT**

With these objectives of the study which are (1) to examine service quality of dental care service, (2) to examine patient satisfaction of dental care, (3) to examine patient trust and loyalty of dental care and (4) to identify the influence among service quality, patient satisfaction, trust and loyalty, service quality factors influencing patient satisfaction, trust and loyalty towards dental care services in Yangon, Myanmar, will be studied in this research.

In today challenging business world, providing higher service quality to the customers is important key factor in order to have competitive advantages among the increasing numbers of hospitals where patients are customers. Providing higher quality service to the patients can attract to get the satisfaction of the patients, leading to achieve the customer loyalty by retaining the current customers, engaging new customers and even enticing competitors' customers. Moreover, being trust on the service quality provided by

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the service providers can absolutely influence revisiting the clinic and creating loyal customers.

The study was based on customers' perspectives and the research was conducted in Yangon city which is the most populated and largest economic centered of Myanmar. For the research methodology, quantitate approach will be used in this research. The quantitative approach with questionnaire survey was distributed to the dental patients utilizing the dental clinics in Yangon to explore the service quality factors affecting patient satisfaction, trust and loyalty of dental care service.

The findings indicated that service quality of structure, process and outcomes have positive influence on patient satisfaction, trust and loyalty. The higher the service quality will lead to the higher the patient satisfaction, trust and loyalty. Therefore, the quality of dental care service items with physical, staff, professionalism, interaction, reactivity, administration and outcomes of the services must be improved in order to achieve patient satisfaction, trust and loyalty.

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## **CHAPTER 1**

## **INTRODUCTION**

This chapter provides an introduction to the research covered in this study. It starts by explaining the background of the research and then discusses the significance of the study, followed by research objectives, research questions, scope of the study, expected benefits. Finally, there are details of the operational definitions. The topics of this chapter are as follows;

- 1.1 Background of the Research
- 1.2 Significance of the Study
- 1.3 Research Objectives
- 1.4 Research Questions
- 1.5 Scope of the Study
- 1.6 Expected Benefits

## 1.1 Background of the Research

Nowadays almost every organization is concerned with the matter of satisfaction that will be received by the users who can be known as customers, patients, consumers or clients (Newsome and Wright, 1999). Trying to satisfy the customers has become the most important concern of every company for all kind of business industries in today market-oriented business world because it can result in the long-term performance of the firms and continue to the customer purchasing behavior (Ngo, 2015). That's why, the organizations, the service providers or the companies should make sure that their services or products can provide satisfaction to the customers. If customer satisfaction is earned, a number of customers will be followed and the long-term relationship can be built with their customers. Newsome and Wright (1999) also firmly stated consumer satisfaction as "the very core of modern marketing theory and practice" which supports the concept of meeting the needs of customers among the organizations to get the benefit of surviving and prosperity.

The application of customer satisfaction in the healthcare field was started in 1984 when a publication applied customer satisfaction by calling for users' points of view to measure the quality of life and since then, it has been commonly accepted that healthcare service cannot be defined as high quality without the measurement of patient satisfaction (Department of Health and Social Security, 1984). The concept of patient satisfaction in healthcare has been defined with different perceptions in previous literature. Patient satisfaction is defined in the Donabedian's quality measurement model as the outcome of the healthcare while the structure and the process of care have been measured by the experiences of patients (Oyvind, Ingeborg and Hilde, 2011). Jenkinson C et al. (2002) described that patient satisfaction represents the attitudes towards care or aspects of care.

Then, Rama and Managaluru (2011) pointed out patient satisfaction as the emotions, feelings and perceptions of the patients on the healthcare services delivered to them. Moreover, it was defined by others researchers as the consistent level between patient expectations of ideal care and their real experiences of receiving on that care (Iftikhar, Allah, Shadiullah, Habibullah, Muhammad, and Muhammad, 2011).

There is literature review which highlights some factors affecting patient satisfaction in both provider-related and patients-related ones. Providers-related factors are the proficiency of physicians, interpersonal communication skills, hospital staff's behavior, access to care, basic facilities and infrastructure while patient-related factors mean demographic characteristics of patients, trust and feeling on perception of healthcare decision (Sofaer, Crofton, Goldstein, Hoy and Crabb, 2005; Renzi *et al.* 2001; Schoenfelder, Klewer and Kugler, 2011).

Service quality reveals the measurement to which level of service quality delivered can match the expectations of the customers (Lewis and Booms, 1983). According to Brown and Swartz (1989), companies which provide higher service quality can be attracted and valued more by the customers. When the customers get the satisfaction with the products or services provided, that satisfaction can lead to repeat purchases, loyalty and customer retention which can be seen in the figure of any successful businesses (Zairi, 2000). Thus, quality has become an only one service factor resulting the customers' satisfaction (Cronin and Taylor, 1992; Zeithaml et al., 2006). Healthcare industries have been put many efforts on the continuous improvement in the quality provided and this has been gradually increased since 1990 and then, in accordance with Donabedian's statement on the patient perception on the quality of healthcare assessment, patient centered care has

been integrated as the most important part in providing healthcare services (Aerlyn and Paul, 2003).

Patients is desirable for receiving the quality of dental care services (Karydis, Komboli-Kodovazeniti and Hatzigeorgiou, 2001). Poorterman, Van Weert and Eijkman (1998) stated that dental patients who can be called the consumers of healthcare are highly aware in increasing demand for more responsibility from the service providers. Concerning with improving the quality of dental care services, some factors are determined for the dental service quality such as ensuring oral health, achieving the desires of the patients, satisfying the needs of the patients and providing optimal solutions for the best process or procedures in function (Karydis, Komboli-Kodovazeniti and Hatzigeorgiou, 2001). There are several research studies showing that the quality, satisfaction and dissatisfaction in healthcare services are determined by variables like great relation between doctors and patients, available of basic infrastructure, waiting time, consultation time and information received (Bankauskaite and Saarelma, 2003; Pinidiyapathirage and Wickremasinghe, 2007). Therefore, the quality of dental care service is the distinction of service factor for the dental healthcare sector.

Patient satisfaction with dental care service quality is an important aspect of influencing factor to visit again in the future (Levin, 2004). In another word, it can be explained that satisfied patients will become loyal customers, re-visitors, and contribute positively to the success of their dental care experiences. Stewart and Spencer (2005), described patient satisfaction as the extent to which the needs or expectations of the patients are met with decent standard of service quality. Handelman, Fan-Hsu and Proskin (1990) also stated that patient satisfaction can help to locate the strength and weakness aspects in

the dental centers and assist in evaluating the quality of treatment in the dental field. Patient satisfaction may seem easy to understand but difficult to perform because it reflects total experience of dental healthcare service concerning with many factors such as service quality, emotional, intellectual, previous experiences and expectations of the patients. According to Kotler (2000), satisfaction is defined as "a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance or outcome, in relation to his or her expectations".

As an important factor, in order to survive in today challenging business world, loyal customer is needed for healthcare sector due to considering in increasing the number of hospitals where patients are customers (Tosyali, Cem & Tosyalı, 2019). If patients are not satisfied with a product or service, they are more likely to change their attention to another provider. Therefore, the service quality received is required as an important factor building customer loyalty. High quality services can attract new customers, retain the current customers, and even entice competitors' customers (Deng et al., 2010). Receiving high quality service in a hospital can convince patients more likely to return to the same hospital in the future, share positive comments to the others and then, recommend to their friends and relatives to use the service (Taner and Antony, 2006). What is more, when considering about the high interaction between consumer and service provider in the service sector, trusting the service provider influences consumer loyalty (McAlexander et al., 2002).

In the dental healthcare sector, according to the previous research, the consumer plays a co-creator role in his or her dental experience which should, in other words, make them loyal customers and come back to the dentist (Alhidari and Alkadhi, 2018). Additionally, in healthcare, trusting the service provider could influence revisiting the

clinic and creating loyal consumers (Suki, 2011) because trust has a positive influence on buying behavior because it reduces the uncertainty level to both seller and buyer (Kenning, 2008).

The study of the relationship between service quality, satisfaction, trust and royalty of dental care services will be conducted in Yangon, the largest city in Myanmar, situated in Southeast Asia and one of the ASEAN member countries. The model for the quality of Dental Care by Wen- Jen Chang and Yen- Hsiang Chang (Chang and Chang, 2013), adapted from Donabedian's perspective, will be studied to measure the attitude of the patients on the quality of dental care services. Nowadays, private hospitals and specialist clinics have become gradually famous and another alternative choice of treatment providing better and more sophisticated facilities than public ones, especially in Yangon and Mandalay cities in Myanmar (Ipsos business consulting, 2013). According to report of the Private Health Statistics (2015), there are 193 private hospitals, 201 private specialist clinics, 3,911 private general clinics, and 776 private dental clinics in Myanmar (Nyi Nyi Latt et al., 2016). Yangon has the highest number of private hospitals and 65.8% of the whole country (Ministry of Health and Sport, 2018) and there are 369 dental clinic services in Yangon (Myanmar Yellow Pages, 2019). There are two Government dental universities in Myanmar: one is in Yangon and another one is in Mandalay. There is no private dental institution in Myanmar. Dental professionals from those two universities are providing dental care services to the whole population of the country.

Maintenance and qualification of the dental care services provided by all the dental practitioners must be upgraded according to the conformity with the provisions of the Myanmar Dental Council (MDC), formed under the Myanmar Dental Council Law and

approved by the Ministry of Health and Sports, Myanmar (Myanmar Dental Council, 2018). According to Aung, Maung, Zaitu and Gawaguchi (2018), under Myanmar Dental Care Council Law, the total number of registered dentists are 4,539 and one fourth of those are working for the government or public sectors, and the rest are for the co-operate or the private sectors. That's why dental surgeons are more in the private sectors than in the public sectors. Private dental clinics, playing an important role, are mainly in the big cities and towns, and a patient has to pay user charges as out-of-pocket expense which refers to the payment of the medical services that individual must pay on his or her own. The public sectors consist of dental surgeons working in government hospitals, school health teams and at the two dental universities mentioned above. From the 2019 data of health manpower and Population and Housing Census data, it is described that dentists to population ratio is approximately 1: 16,000 (Aung, Maung, Zaitu and Gawaguchi, 2018), meaning reinforcement is needed for dental healthcare force comparing to the population number. Moreover, dentists to population ratio is unfortunately quite higher than the estimated ratio prescribed by WHO which is 1: 7500 (Thomas, 2013). It can be clearly seen that the location of the dentists and distribution of the services should be carefully considered based on the population of the country.

The result of this study will open new opportunity to improve the quality of dental care services, to maintain the loyal customers of dental care and to understand the level of satisfaction on current situation of dental care services Myanmar. Most of the previous papers have not been focused on the study of dental care service quality, patient satisfaction, trust and loyalty concerning with dental care service sector in Myanmar.

## 1.2 Significance of the Study

According to the European Chamber of Commerce in Myanmar (2018), "rising income and the emerging middle class will drive demand for private hospitals in the future" and then, a number of foreign providers are trying to enter into the healthcare market in Myanmar because of being interest in the customers who would like to choose abroad such as Singapore and Thailand for purchasing medical care. Thus, this study will provide healthcare service providers with invaluable competitive advantages in surviving upcoming challenges of Myanmar healthcare service sector in the future.

In addition to, very few studies have studied about the service quality, the satisfaction, trust and loyalty in developing countries, particularly in Myanmar. The quality improvement in healthcare sector has become an issue to be considered in many developing countries by introducing initiatives to follow in the footsteps of developed countries where the delivery of high-quality service is the key to success in service industries (Ahmed, Tarique and Arif, 2017). Therefore, this study has the opportunity to study about the quality of dental care, patient satisfaction, trust and loyalty of private dental care service industry in Myanmar.

Moreover, this work will provide information regarding factors affecting on patient satisfaction, trust and loyalty in dental healthcare service industry in Myanmar. This piece of work will create potential opportunity for the dentists and dental healthcare service providers in Yangon and other regions of Myanmar to enrich dental service quality, patient satisfaction, maintain loyal customer in dental healthcare service industry of Myanmar. Government organizations, educational institutions, corporate entities, business policy

makers and other researchers will refer this research for any study concerning with customer satisfaction.

## 1.3 Research Objectives

The objectives of this study are as follow;

- (1) To examine the quality of dental care service
- (2) To examine patient satisfaction of dental care service
- (3) To examine patient trust and loyalty of dental care service
- (4) To identify the influence among quality of dental care service, patient satisfaction, trust and loyalty

## **1.4 Research Questions**

The research questions of these studies are as follow;

- (1) How is the quality of dental care service in Yangon, Myanmar?
- (2) How is the patient satisfaction of dental care service in Yangon, Myanmar?
- (3) How are the patient trust and loyalty of dental care service in Yangon, Myanmar?
- (4) How is the influence among quality of dental care service, patient satisfaction, trust and loyalty?

### 1.5 Scope of the Study

The research will be done in Yangon, the largest economic center of Myanmar (JICA and YCDC, 2014) with the population of about 7.4 million according to the Myanmar Population and Housing Census 2014 (Department of Population, Ministry of Immigration and Population, 2015). It is the largest important service providers in healthcare, education, tourism, research and development etc., (Moe, 2009). Nearly 50 %

of the private dental clinics are in Yangon. The quantitative approaches will be used in this study. The respondents answered for the questionnaire surveys will be the patients who used dental services in the dental clinics of Yangon city.

## 1.6 Expected Benefits

- (1) This study will provide dental care service providers in Myanmar by the information concerning with the factors of dental care service quality, patient satisfaction, patient trust and loyalty.
- (2) This study will help dental care service providers in Myanmar in enhancing dental care service quality, maintain current customers, attracting new customers and achieving competitive advantages.
- (3) This study can also be referred for any relevant purpose by the Government organizations, institutions, service providers, business organizations and researchers etc.

## 1.7 Operational Definitions

**Dental Care Service** refers to the service attributes concerning with the structure, process and outcome of the dental healthcare delivered by the dental care service providers to the dental care patients.

**Dental Care Patients** refer to the patients receiving dental care services in Myanmar.

**Dental Care Service Providers** refer to the people who provide dental care services in Yangon for the dental care patients.

**Loyalty** refers to the customers who intend returning to use the services, repeating purchasing services, and then, being willingness to recommend the services to friends and relatives.

**Patient Satisfaction** refers to the extent to which a patient is content with the dental care services which he or she receives from the dental care service providers.

**Trust** refers to confidence and belief of the customers with the service quality offered by the dental care service providers.

#### **CHAPTER 2**

### LITERATURE REVIEW

This chapter includes relevant theories and discussed literatures in the areas such as customer satisfaction and patient satisfaction; service quality and quality of dental care services; Donabedian's Quality of Medical Care, Quality of Dental Care by Wen-Jen Chang and Yen-Hsiang Chang, adapted from Donabedian's perspective; loyalty; trust; context of dental care services in Myanmar; conceptual framework and research hypothesis. The topics of chapter (2) are as follows:

- 2.1 Theory and Related Research
  - 2.1.1 Customer Satisfaction and Patient Satisfaction
  - 2.1.2 Service Quality and Quality of Dental Care Service
  - 2.1.3 Donabedian's Quality of Medical Care
  - 2.1.4 Quality of Dental Care by Wen- Jen Chang and Yen- Hsiang Chang, Adapted from Donabedian's Perspective
  - 2.1.5 Trust
  - 2.1.6 Loyalty
  - 2.1.7 Context of Dental Care Services in Myanmar
- 2.2 Conceptual Framework
- 2.3 Research Hypothesis

### 2.1 Theory and Related Research

#### 2.1.1 Customer Satisfaction and Patient Satisfaction

These days, virtually every organization has taken concerned the satisfaction of the users, to whom they are known as clients, customers, consumers or patients of its products or services, and then, satisfaction has become a subject to be studied extensively in the fields of sociology, psychology, marketing and healthcare management (Newsome and Wright, 1999). Many early scholars believed that the creation of a satisfied customer was the fundamental core of the business (Drucker, 1973).

Concerning with the definition of customer satisfaction, there are a lot of ideas as well as theories. In 1997 Oliver had defined customer satisfaction as the consumer's fulfillment response. In other words, it is a kind of judgment on a production or service feature, or the product or service itself, which can happen a happiness level of consumption related to fulfillment. While Oliver stated that customer satisfaction is about fulfillment, in contrast, Kotler and Keller (2006) proposed that, "Satisfaction is a personal feeling of satisfaction or dissatisfaction resulting from comparing services performances in relation to his or her expectation". Moreover, customer satisfaction, as noted by Tahir, Waggett and Hoffman (2013), is "a customer's perspective based on expectation and then subsequent post purchase experience".

What is more, the term customer satisfaction is emphasized by many researchers and academicians as a key element of a company's success as well as a crucial factor of its survival because customer satisfaction can make a positive effect on company's profitability (Novikova, 2009; Angelova and Zekiri, 2011: Jashireh, Alireza and Mobarakabadi, 2016). Moreover, satisfaction can be seen as a part of confirmation or

disconfirmation of expectations and is best developed as a perspective on the performance of the service (Taylor and Cronin 1994).

In the healthcare service industry, patient satisfaction is an important aspect to evaluate the quality of healthcare. What is more, patient satisfaction-oriented is the vast majority of healthcare service quality work by marketers (Turner and Pol, 1995). It has been used in medicine for several years and according to some literature reviews, the term patient satisfaction is increasingly being used in dentistry (Kress and Shulman, 1997; Kress, 1998; Newsome and Wright, 1999; Croucher, Robinson, Zakrewska, Cooper and Greenwood, 1997; Butter and Willis, 2000). Stewart et al (2001) stated that; "Patient-centeredness is becoming a widely-used but poorly understood concept in medical practice. It may be most commonly understood for what it is not – technology-centered, doctor-centered, hospital-centered, disease-centered". With the shift in medicine and dentistry to patients being "consumers" of care, the concept of "consumerism" and "inclusion of patients" in the assessment of service has gained greater prominence (Sitzia and Wood, 1997).

No matter how the concept of patient satisfaction in healthcare industry is defined in many ways, the reviewed literature agreed on the fact that there is an impact of measuring patient satisfaction on healthcare quality improvement, and the evaluation of care from the perspective of patients is a realistic tool for providing opportunity of improvement, enhancing strategies decision making, reducing costs, meeting patients' expectations, framing strategies for effective management, monitoring performance of healthcare plans and providing benchmarking to the healthcare institutions (Oyvind, Ingeborg, 2011; Iftikbullahhar, Allah, Habibullah and Muhammad, 2011; Nicholas, Julie, Kimberly and

Ron, 2005; Shou - Hisa, Ming- Chin and Yung-uang, Rashid and Amina 2013). Hashim (2005) has determined patient satisfaction as the principle level of quality of healthcare services. Lliffe, Wilcock, Manthorpe, Moriarty, Cornes, Cloughet et al., (2008) stated that fulfillment of the expectations and demands of parents such as careful response to the patients, assurance to the treatment, resolving doubts and confusion would lead to satisfaction of patients and then attract them to receive the service of the treatment again in the future.

Theories concerning with patient satisfaction were published in the 1980s with being "restatements" of those theories (Hawthorne, 2006) such as; Discrepancy and transgression theories of Fox and Storms (1981) explaining that patients' healthcare orientation and providers' conditions of care must be congruent for patients' satisfaction; Expectancy-value theory of Linder-Pelz (1982) postulating that satisfaction could be treated as personal beliefs and values about care as well as prior expectations about care; Healthcare quality theory of Donabedian (1988) proposing that satisfaction was the principal outcome of the interpersonal process of care; Determinants and components theory of Ware, Snyder, Wright and Davies (1983) propounding that patient satisfaction was a function of patients' subjective responses to experienced care mediated by their personal preferences and expectations.

## 2.1.2 Service Quality and Quality of Dental Care Service

Since 20<sup>th</sup> century, the subject relating to service quality has been widely discussed and its idea is developing till today to assist in the performance of organization and achieving globally competitive advantages (Ali, Zhou, Hussain, Kumat, Neethiahnanthan and Ragavan, 2016; Fotaki, 2015). According to Chiara et al., (2007), providing a superior

service quality to the customers is one of the key factors enabling the firms to get winning competitive advantage in today's changing business environment. Ladhari (2011) has also stated that nowadays marketers are trying to pay attention more on the evaluation and continuous monitoring of service quality, including innovation offerings and service developments, leading to the direct influence on the customers' experience with service offered. Better service quality increases the value of perceived service and satisfaction and then, maintains the customer retention and improves financial performance with enhancing a firm's image (Nguyen and Leblanc, 1998). Assessing the quality of care is a prerequisite in provision of dental health services in which the participation or cooperation of patient plays an important role (Gurdal, Cankaya, Onem, Dincer and Yilmaz; 2000).

There are many previous studies presenting that quality in healthcare sector has become gradually a dominance part and there has been looking for quality services in everyone's live (Andaleeb, 2003; Conley, Kubsch, Ladwig and Torres, 2003; Eiriz and Figueiredo, 2005; Evans, Edejer, Lauer, Frenk and Murray, 2001; Hall, 2004). Higher healthcare quality can result in the better in performance in the organization and the satisfaction for the patients, clients and suppliers (Hasin, Seeluangsawat and Shareef, 2001; Hassan, 2005; Hudelson, Cleopas, Kolly, Chopard et al., 2008; Kerssens, Groenewegen, Sixma, Boerma and Vander, 2004).

The field of dental healthcare services is no exception to that phenomenon above. In the increasingly competitive market of healthcare industries, the dental healthcare serviceproviders need to focus on the quality of healthcare service delivery to achieve high and excellent rating of patient satisfaction. Researcher have explored various dimension of the perceived service quality or measurement of patient perception of healthcare quality in order to understand the factors affecting patient satisfaction. Stewart and Spencer (2005) described patient satisfaction as the degree to which patients' need: "meet their expectations and provide an acceptable standard of service". The primary responsibility of a dentist is to provide a quality patient care (McDonald and Avery, 2003).

Patient satisfaction with care is also a measure of the quality of performance received by patients (Newsome and Wright, 1999). According to Newsome and Wright (1999), the factors affecting patients' satisfaction with dental care include "technical competence, interpersonal factors, convenience, costs and facilities". Some researchers have pointed out the outcome of dental treatment impacting upon patients' attendance for dental treatment while a poor outcome may delay to the future visits to take that service again (Sur, Hayran, Yildirim and Mumeu, 2004; Zimmerman, 1988; Hill, White, Morris, Goodwin and Burke, 2003).

In addition, facilities such as latest equipment availability, comfortable seating, cleanliness, background music and choice of magazines are also another influence on patient satisfaction but less important than other factors (Andrus and Buchheister, 1985). Anderson, Thomas and Phillips (2005) mentioned four types of out-of-hours emergency dental service, including 'walk-in' and 'telephone-access' services, that could correlate with patient's satisfaction.

## 2.1.3 Donabedian's Quality of Care

Avedis Donabedian (1988) described a framework for assessing healthcare service quality which is flexible enough to apply to many situations. He explained that patients' assessments of healthcare quality are more complex than those from other general business services. The distinction between components and categories of healthcare quality is an

integral part of most conceptualizations of quality care. Therefore, he differentiated among three components of quality: technical aspects, interpersonal aspects, and amenities of care. The technical aspects refer to how well medical science and knowledge are applied to the diagnosis and treatment of a medical problem. The interpersonal component of quality is defined in terms of the responsiveness, friendliness, and attentiveness of the health care provider in interacting with the patient. Then, the amenities of care include the appeal and comfort of the health care facility. Donabedian further placed individual measures of quality of care into one of three categories: structure, process, and outcome.

In his structure-process-outcome model to evaluate the quality of healthcare services, "structure" was denoted as the attributions of the setting in which care takes place, "process" as the components in delivering and receiving cares and "outcome" as the effect of care on the health status of patients. Structure includes the attributions of material resources such as facilities, equipment and money, of human resources such as the number and qualifications of personnel and of organizational structure such as medical staff organization, method of peer reviews. Process covers all the components of performance which are actually done by the actions of practitioners to deliver cares and by the actions of patients to receive cares, and then is related to interactions within and between practitioners and patients. The outcomes of the quality healthcare show changes which appear by the improvement in the health status of the patients, their knowledge as well as by their satisfaction with healthcare services. This three-part approach to the assessment of the quality has the relationships based on the idea that good structure should promote good process and in turn, good process should increase good outcome.

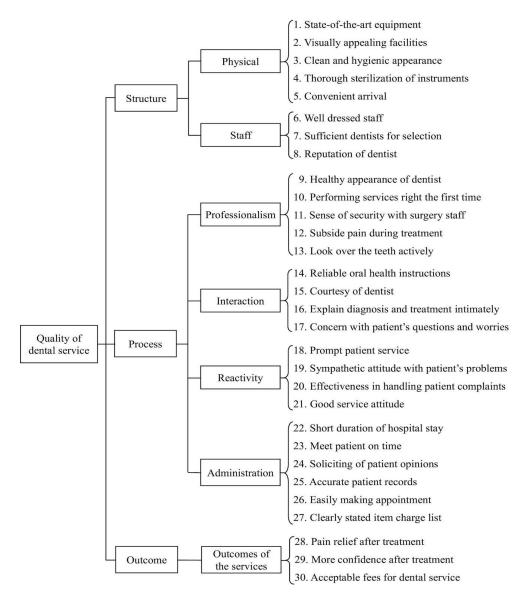
Moreover, he stated that clients have the ultimate authority and meeting their expectations and values on the measure of the quality care would decide the success of the providers. Therefore, it has been acknowledged that the measurement of client satisfaction is an important tool for research, administration, and planning for the quality care. Researchers have also stated that patients' judgments of quality care rely on the responsiveness of healthcare providers to patients' unique needs (Bendall-Lyon, Powers, and Swan 2001; Perucca 2001). The concept of his model has remained the foundation of quality assessment till today. Structure has long been assessed by means of board certification of physicians and Joint Commission accreditation of hospitals. Process and outcome measures are now vetted and endorsed by the National Quality Forum and National Committee for Quality Assurance, and Medicare publicly reports the performance of hospitals, nursing homes, and health plans on such measures. (Ayanian and Markel, 2016).

# 2.1.4 Quality of Dental Care by Wen- Jen Chang and Yen- Hsiang Chang (Chang and Chang, 2013), Adapted from Donabedian's Perspective

According to the Chang and Chang (2013), a number of studies has developed to assess healthcare service quality and patient satisfaction is extensively used to evaluate service quality. The SERVQUAL model, or the so-called gap model was mentioned in their paper as an assessment useful tool for the service quality of general business and for calculating the gap between customer/patient expectations and perceptions. However, they agreed with the indication of Donabedian meaning that healthcare significantly differs from general business services and its quality assessed by the patients are more complex that those for other services. For evaluating healthcare service quality, Donabedian developed

a systematic framework which is namely the structure-process-outcome model. (Donabedian, 1988). Chang and Chang explained that Donabedian framework has been widely adopted to access healthcare service quality. They mentioned that the relationship between satisfaction and these three aspects had been analyzed in much literature and service elements were also explored in aggregate.

Donabedian's model of structure, process, and outcome had been analyzed in their paper to explore the dental care service elements. The aim of their research was to propose a conceptual framework for identifying key drivers and provide guidance for enhancing dental care service quality. They suggested the framework of investigated dental service attributes based on Donabedian 's perspective as following;



**Source:** Chang and Chang (2013)

**Figure 2.1** The Framework of Investigated Dental Service Attributes Based on Donabedian's Perspective

The dentistry department of a typical Taiwanese hospital was investigated in their study. As a survey instrument, Kana-type questionnaire was developed for the 400 respondents who are all adult patients subsequently visiting the studied hospital for dental treatment. Their result indicated that from the patients' perspectives, service elements concerning with physical characteristics category of structural aspects such as good

hygienic facilities and up-to-date equipment are essential. That finding is also consistent with the work of Palihawadana and Barnes (2004) and Karydis, Komboli-Kodovazeniti, Hatzigeiriou and Panis (2004) who found that these service elements were placed at the top of patients' precedence and need to be fulfilled for all dental care services.

Moreover, when patient satisfaction regarding service elements was explored by using a five-point Likert scale ranged from strongly dissatisfied to strongly satisfied, the study indicated for positive patient satisfaction with most service elements. However, six service elements revealed lower satisfaction, including ease of making appointments, a short duration of hospital stay, convenient arrival, clearly stating the item charge list, meeting patients on time, and soliciting patient opinions. However, it was clearly stated that after one year of working on the research for improving those lower satisfaction service elements, patient satisfaction could be improved and the study of Chang and Chang had been proved as the good guidelines for enhancing dental service quality.

#### 2.1.5 Trust

Customer trust is viewed in business as one of the most antecedents of stable and collaborative relationship so that it is observed by researchers to be essential for maintaining and establishing long-term relationships (Rousseau, Sitkin, Burt, & Camerer, 1998; Singh & Sirdeshmukh, 2000). In the service sector, being trust on the service provider is an influence factor for customer loyalty because of having high interaction between customer and service provider (McAlexander et al., 2002). According to Suki (2011), similarly in healthcare, trusting the service provider influences revisiting the clinics and establishing loyal customers. Morgan and Hunt (1994) stated trust as an important factor in understanding service marketing and marketing relationship.

Several definitions can be found in the literature of consumers. Grabner-Kraeuter (2002) stated that "trust reduces complexity in situations of uncertainty". Also, Mayers et al. (1995) defined trust as "the willingness of a party to believe the actions of another party based on the expectation that the other will perform a particular action properly, irrespective of the ability to monitor or control the other party". According to Ba (2001), in service marketing, "trust is mainly the most important element in the transaction processes". Generally, "studies have pointed out that trust has a positive influence on buying behavior because it reduces the uncertainty level to both seller and buyer" (Kenning, 2008).

#### **2.1.6 Loyalty**

Customer loyalty occurs when the customers are satisfied with the specific product or service and then it will be followed by keep purchasing of the loyal customers on the products constantly (Hashem and Ali, 2019). Kumer and Advani (2005) explained that the loyal customers are going to spread a positive word of mouth about the service and the service provider. According to Iddrisu (2011), loyal customers are more likely to recommend purchasing the service in front of their family members and friends. They will also share good things about service to others and consider being the primary choice in receiving the services (Lupiyoadi, 2001). Kotler and Gertner (2002) also pointed out that the loyal customers makes convincing others to purchase the concerned services. Moreover, as the advantages of customer loyalty, they mentioned that loyal customers perform in increasing the profitability, sales volumes, cost savings of the service providers and importantly customer retention rate.

Loyalty can be characterized in two different ways as an attitude and behavioral, proposed by marketing literature (Jacoby and Kyner, 1973). An attitudinal loyalty has been considered as distinctive sentiments creating an individual's general attachment to a product, service or organization (Fornier, 1994). Behavioral loyalty incorporates keeping on purchasing services from the same provider, increasing the scale and scope of a relationship and willingness to do the act of recommendation (Yi, 1990). Thakur and Singh (2012) expressed that customer loyalty is highlight by the combination of attitudes such as "intention to buy again and/or buy additional products or services from the same company, willingness to recommend the company to others, commitment to the company demonstrated by a resistance to switching to a competitor" and behaviors such as "repeat purchasing, purchasing more and different products or services from the same company, recommending the company to others".

Consumer loyalty to a healthcare provider has been defined as patient loyalty (Sumaedi *et al.*, 2015). According to Lombardi (2012), "loyal patients are the best type of patients" because a happy patient with the service will definitely do recommendation to the friends, family and co-workers. Loyalty is the crucial factor promoting continuity of care, compliance with medical advice and greater use of medical services (MacStravic, 1994). Loyal patients continue using the services, following prescribed treatment plans and maintaining relationships with specific healthcare providers. Consequently, healthcare services and patient outcomes have been improved for the sake of healthcare providers and patients (Zhou *et al.*,2017). In order to manage patient loyalty efficiently, the factors that affect patient loyalty have been conducted in the empirical research to predict them by starting with the most popular factors 'satisfaction' and 'service quality', and moved on to

other factor such as 'trust' and (Zhou *et al.*, 2017; Patawayati, Setiawan, and Rahayu, 2013; Lei and Jolibert, 2012).

Concerning with the patient loyalty in dental field, pervious research indicates that the consumer plays a co-creator role in his/her dentist experience (Sondell et al., 2002; Shigli and Awinashe, 2010; Hamasaki *et al.*, 2011). This experience should make consumers come back again and make the consumers loyal to his/her dentist. According to Alhidari and Alkadhi (2018), loyalty among the customers of dental practices from the perspective of consumers' attitude means a favorable attitude towards a given brand or the intention of purchase. Furthermore, the behavioral aspect of consumers shows repeated purchases and then, the combination of the two perspectives is evaluating customer loyalty through attitudinal and behavioral factors. For example, repeated purchases, revisits, spending, etc. are combinations of the two perspectives.

Researchers claim that there is a significance loyalty ratio when a patient has completed his or her treatment and then, the service provider of the dental care service can be seen as an important driver of patient retention (Makarem *et al.*, 2014). Caruana and Fenech (2005) insist on the importance of the satisfaction in dental clinics as prior to patient loyalty in the study. Similarly proved that perceived service quality increased the re-visit intention of patients through the enhancement of patient satisfaction (Wu, 2011). In addition to, Mc Alexander *et al.* (2002) describes about the friendship and trust concerning with the service sector as an influential on the development of loyalty.

#### 2.1.7 Context of Dental Care Service in Myanmar

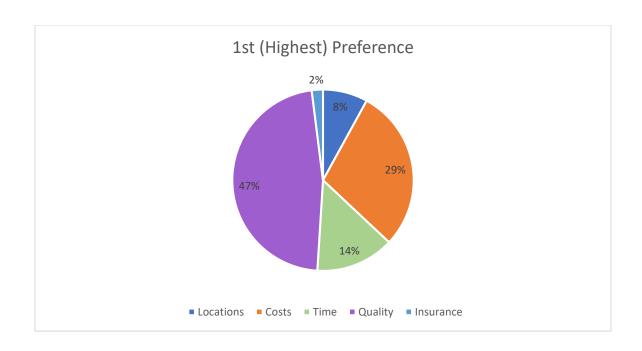
In Myanmar, dental care services are provided by both the public and private sectors, but most of the dentists are working for the private sector than the public one. The dentists from the private sector are working in the government hospitals, school health teams and at both of Yangon and Mandalay dental universities. There is no private dental institution in Myanmar and oral healthcare for the whole population is provided by the professionals from these two public dental universities. Free dental care services are available at Outpatient Department (OPD) of the two dental universities and at the various specialty departments opened as the part of the training program for the dental students. According to the Myanmar healthcare system review by Sein, Myint, Tin, Win, Aye and Sein (2014), the Myanmar Dental Council (MDC), approved by the Ministry of Health and Sports Myanmar, and Myanmar Dental Association (MDA), a non-government organization, provides mobile dental teams delivering free dental treatment to people in remote and hard-to-reach areas of the whole country.

Private dental clinics are mainly in the big cities and towns, and user payment which is so-called out-of-pocket expense will be charged to individual patients. Private sector is the main dental cares services providing a huge proportion of the population, who pays out-of-pocket for these services. According to the healthcare guide 2019 published by the European Chamber of Commerce in Myanmar, healthcare services from public sectors have considerably encountered with the shortage of healthcare professionals and staffs, limited funding resources and skills gap so that emerging middle class with middle income consumers has driven demand for private hospitals with higher quality of healthcare services. Major cities such as Yangon and Mandalay have already a huge pool of middle-

class income consumers and increasing in this class is looking for more sophisticated and higher quality of healthcare services.

Concerning with the behaviour of dental patients in Myanmar, according to the study of Aung, Maung, Zaitsu and Kawaguchi (2018), there is still in significant gaps of dental healthcare knowledge in Myanmar population. They explained in their study that dental caries and periodontal diseases are the common oral diseases suffering around the country. The high proportion of untreated caries has been pointed out in their study as the result of lack of people's awareness on proper oral health, low utilization of dental care services. They stated financial hardship and geographical barriers as an additional reason for preventing consumers to receive dental care services in some remote areas of the country.

Regarding consumers' preferences and choices of dental healthcare services in Myanmar, there is no previous and study for this specific dental care services. However, the survey from Myanmar Healthcare Report 2013-2014 by Shobert 2014 has indicated the healthcare consumers' preferences on what they value most related to healthcare: 47% of consumers' choices for the highest priority is improving quality; the second high priority that 29% of consumers' choice for reducing the cost; the third highest priority among 14% of consumers' choice is reducing the time spent to access healthcare and 8% of consumers' choice as the fourth highest priority is location where healthcare could be accessed. Then, the last priority of 2% consumers' choice is ability to purchase private insurance.



Source: Myanmar Healthcare Report 2013-2014 (Shobert, 2014)

Figure 2.2 Healthcare Consumer Preference in Myanmar

#### 2.2 Conceptual Framework

Based on the above literature review, the conceptual framework of this study will be as follow;

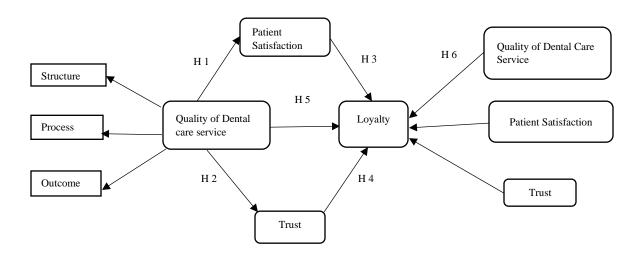


Figure 2.3 Conceptual Framework

#### 2.3 Research Hypothesis

# H 1: Quality of Dental Care Service has Positive Influence on Patient Satisfaction;

Nowadays, transformation of health care is focusing on consumers' market from sellers' market where fulfilling patient satisfaction on the needs of patients is considered as a part of quality definition (Lliffe *et al.* 2008). Hence, providing high quality of dental care service and achieving patient satisfaction has become important factors with commitment for the dental healthcare providers (Dewi, Sudjana, & Oesman, 2011). In healthcare settings, patient satisfaction is widely used to determine service quality. There is a result showing the positive association between service quality and patient satisfaction

by the study of Shabbir et al. (2016). Fenny, Asante and Hansen (2014) reported that the Donabedian "structure–process–outcome" conceptual model provides a framework for assessing factors influencing patient satisfaction with quality of care

### H 2: Quality of Dental Care Service has Positive Influence on Trust;

Service quality has a significant influence on customer trust (Eisingerich and Bell, 2007). Moreover, trust plays a role in loyalty as it has become the influencing factor between service quality and customer loyalty (Ribbink, Dina, Allard and Van, 2004). In other words, when customers trust the service provider, they will purchase the services and then, eventually becomes loyal customers of that service. According to Coulter and Coulter (2003), service quality is an important preliminary factor to customer trust.

Kabu and Soniya (2017) describe that highly satisfied customers are more likely to become loyal ones than those who are merely satisfied. Amin and Nasharuddin (2013) confirmed that satisfaction plays in loyalty intention and similarly, patient satisfaction has direct impact on patient loyalty (Sutharjana et al, 2013). In this study, the result of this research also supported that patient satisfaction has positive influence on loyalty. In other words, if the patient satisfaction is increased, the loyalty is increased too.

#### H 3: Patient Satisfaction has Positive Influence on Loyalty;

For every organization, satisfaction of a customer is a key element that gives direct affect in increasing customer loyalty to create a better achievement (Kabu & Soniya, 2017) due to the reason that highly satisfied customers are tending to be more loyal than the customers who are merely satisfied. Wu (2011) similarly confirmed satisfaction's direct impact on re-visit intention. Amin and Nasharuddin (2013) showed that satisfaction plays

significant plays in loyalty intention. Sutharjana at al. (2013) found that patient satisfaction has a direct impact on patient loyalty.

## H 4: Trust has Positive Influence on Loyalty;

Patawayati et al. (2013) stated that trust affects loyalty in a significantly positive manner and then, the higher the trust the higher the patient loyalty will be. Ribbink et al., (2004) explained that trust plays a role of influencing factor on loyalty when customers becomes the loyal one of the services received from the service provider to whom they feel secure and trust.

#### H 5: Quality of Dental Care Service has Positive Influence on Patient Loyalty;

Service quality is an important factor for building customer loyalty. Services with higher quality can attract new customers, retain the current customers, and even persuade competitors' customers (Deng, Lu, Wei and Zhang, 2010). Zeithaml et al. (1996) have suggested that positive assessment of service quality means customers' desirable behavioral intentions that firmly relate their relationship with the service provider. Consequently, the service provider will be recommended to others with the positive things for his or her service as the customers intend to remain loyal ones to the service provider.

# H 6: Quality of Dental Care Service, Patient Satisfaction and Trust have Positive Influence on Loyalty

This hypothesis will be tested in the study to know whether loyalty has been positively influenced by quality of dental care service, patient satisfaction and trust.

## **CHAPTER 3**

## **METHODOLOGY**

This chapter is about the methodology of the study. It consists of the following items:

- 3.1 Research Design
- 3.2 Quantitative Approach
  - 3.2.1 Sample Selection
  - 3.2.2 Research Instrument
  - 3.2.3 Data Collection
  - 3.2.4 Data Analysis

#### 3.1 Research Design

The quantitative approach will be used in this study. Quantitative approach can be defined as objective, formal and systematic approach through empirical assessment that involve numerical data to measure phenomena and produce findings (Zikmund, Babin, Carr and Griffin, 2013). The numeric values will be used in statistical computations and hypothesis testing through normally using software such as SPSS (Almeida, Faria and Queiros, 2017).

Numerous good points of quantitative approach in the research are such as the data must be valid, reliable, and generalizable to a larger population; the data can be relatively easy to be analyzed; the result cannot be affected by the subjectivity of the researchers and degrees of association between two variables can be easily calculated. In contract, some weak points can be found in that approach such as survey instrument errors resulting to mistakes in measurement and flawed sampling techniques; data may not be robust some complex issues; emotions, behaviors and changes in those of respondents cannot be captures; conclusive reason cannot be provided for the existence of a correlation between two variables. In this study, the structured survey method will be distributed to the respondents, who the patients, utilizing the dental healthcare care services in Myanmar.

#### 3.2 Quantitative Approach

#### **3.2.1 Sample Selection**

The population could not be clearly identified in this research so that the size of sample group in this study would be calculated through the Cochran's formula (1977). The accepted standard for the confidence level is at 95% and allowable error at 5%. Hence, the size of the sample group is calculated as following:

$$n = Z^2/4e^2$$
 (1)

n = size of the sample group

Z = confidence level at 95% ( $\alpha$ = 0.05)

e = probability of error at 5%

 $n = 1.962^2 / 4 * 0.052$ 

n = 384.16

From the calculation, the result of the sample size is 384.16, basing on the confidence level at 95% and probability of error is 5%. The questionnaires will be distributed to 384 patients who used the dental care clinics in Yangon. Quota sampling will be used to select the samples among the shopping centers situated around the Central Business District of Yangon (CBD) which is formed with seven townships and have high development intensity (Moe, 2010). The sample of this research is intended into the patients who have recently used the dental care services in Yangon, Myanmar.

#### 3.2.2 Research Instrument

Data for this research is collected through questionnaires in English and Myanmar language of two versions in order to facilitate the respondents. In this study, the research instrument for collecting the data is the questionnaires with both categorical and continuous scale of measurement. It composes with five parts: part one includes general background sampling consisted of questions about "gender, age, education background, occupation, monthly income of patients, etc." of the respondents who take the dental care services in dental clinics as shown in table 3.2.2 (a); part two includes questionnaire for the measurement of the quality of dental care service described in table 3.2.2 (b) below; part

three concludes questionnaire concerning with "satisfaction" as described in 3.2.2 (c) table; part four presents about the questionnaire of "trust" and the last part will be measured about the "loyalty".

The questionnaire for each part will be explored using a five-point Likert scale, that are ranged by "strongly disagree", "disagree", "neutral", "agree" and "strongly agree".

 Table 3.1 Personal Basic Information Questionnaire Construction

Personal Basic Information	Detail facts
Gender	☐ Male
	☐ Female
Age	$\square \le 20$ years old
	☐ 21-30 years old
	☐ 31-40 years old
	☐ 41-50 years old
	$\square > 50$ years old
Education	☐ High school or lower
	☐ Bachelor degree
	☐ Master degree or above
Monthly Income	☐ Less than 100,000 Kyats
	□ 100,000 - 30,000 Kyats
	□ 300,001- 500,000 Kyats
	☐ More than 500,000 Kyats
Residence	☐ Yangon
	☐ Mandalay
	□ Nay Pyi Daw
	☐ Other, please specify
How long have you been knowing this clinic?	☐ Less than one year
, ,	□ one year
	□ two years
	☐ three years
	□ four years
	☐ more than four years
Number of times visiting to the dental clinic in a year	☐ Less than 50,000 Kyats
	□ 50,000 - 100,000 Kyats
	□ 100,001- 300,000 Kyats
	□ 300,001- 500,000 Kyats
	☐ More than 500,000 Kyats
Payment per one visit	☐ Less than one time
1	□ one time
	□ two times
	☐ three times
	☐ four times
	☐ more than four times
How do you know about this clinic?	☐ Advertisement
·	☐ Friend/ Family Recommendation
	□ Facebook
	☐ Location
	☐ Other, please specify
What kind of treatment do you normally take in this	☐ Routine oral checkup and oral cleaning
clinic?	☐ Cavity filling
	☐ Tooth extraction
	☐ Dental prosthesis
	☐ Aesthetic treatment
	☐ Other, please specify

**Table 3.2** Quality of Dental Care Service Questionnaire Construction

Quality of Dental Care service	Measurement	Reference
Physical Structure	This clinic uses State-of-earth equipment. This clinic has visually appealing facilities. This clinic has cleaned and hygienic appearance. This clinic has provided treatment through sterilization of instruments This clinic is located in convenient arrival.	Adapted from Chang and Chang (2013)
Staff Structure	The staff in this clinic is well dressed. This clinic has sufficient dentists. The dentists of this clinic have good reputation,	
Professionalism Process	The dentists in this clinic have healthy appearance. The dentists in this clinic provide to subside pain during treatment. The dentists in this clinic look over the teeth actively.	
Interaction Process	This clinic is reliable in oral health instruction. This clinic treats patients with courtesy. This clinic explains diagnosis and treatment intimately. This clinic concerns patient's questions and worries.	
Reactivity Process	This clinic provides prompt patient service. This clinic provides sympathetic attitude towards patient's problems. This clinic can perform effectiveness in handling patient complaints. This clinic has good service attitude.	
Administration Process	This clinic meets patient on time. This clinic is soliciting of patient options. This clinic is easy to make appointment. This clinic provides clearly stated item charge list.	
Outcomes of the Services	I feel pain relief after treatment I have more confidence after treatment. I think the fees for dental services in this clinic is acceptable.	

 Table 3.3 Patient Satisfaction Questionnaire Construction

Measurement	Source		
I am satisfied with my decision to choose the dental care	Adapted from Lin (2012)		
services in this clinic.			
I am satisfied with the professional competence of the			
dentist in this clinic.			
I am satisfied with the overall services of this clinic.			
I have good experience with this dental clinic.			
The services in this clinic completely meet my	Adapted from Senasu (2012)		
expectations.			

 Table 3.4 Trust Questionnaire Construction

Measurement	Source
I feel secure when I use dental care services from this clinic.	Adapted from Alhidari and Alkadhi (2018)
I trust the dentist in this clinic.	
The service quality provided by this clinic is reliable. This clinic treats me fairly and justly.	Adapted from Senasu (2012)
I have full confidence with the services provided in this clinic.	

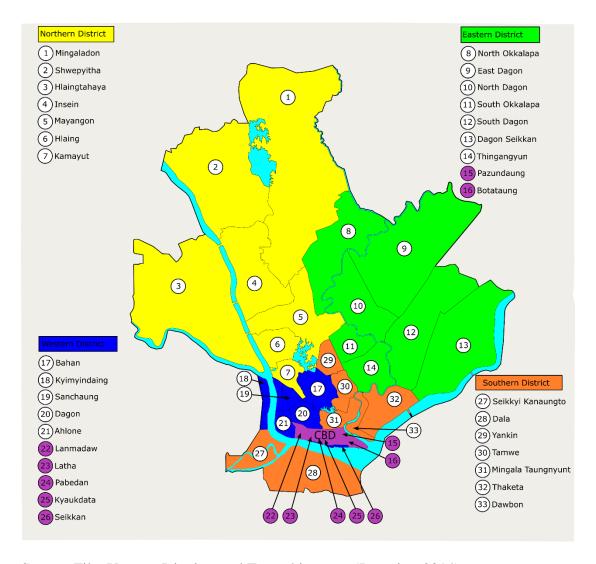
 Table 3.5 Loyalty Questionnaire Construction

Measurement	Source
I intend continuing being a customer to use the services	Adapted from Lasorn (2012)
provided by this clinic.	
I will recommend my friend to use the services provided	
by this dental clinic.	
I will share to others about positive things of the services	
provided by this clinic.	
I will share to others about positive information of the	
services provided by this clinic.	
When I thinking about dental care services, I always	Adapted from Senasu (2012)
make the decision to use the services provided by this	
dental clinic.	
I feel a sense of loyalty to the services provided by this	
clinic.	

#### 3.2.3 Data Collection

In this study, the data is collected through questionnaires in English and Myanmar language of two versions in order to facilitate the respondents while answering the questionnaire. The language translation work for the questionnaire has been done in cooperation with the two professional translators. The message communicated in the source language has to be interpreted with those two translators and transferred into the target language in such a way that the respondents understands what is meant. The size of simple group is set into 384 respondents calculated above by the Cochran's formula (1977). The questionnaire survey will be distributed to 64 respondents visiting to each of the shopping centers situated around the Central Business District of Yangon (CBD), which is the center for commercial and administrative activities. The respondents must have the experience of using dental clinics in Yangon.

CBT is situated with (7) townships of Yangon which are Botataung, Kyauktada, Lanmadaw, Latha, Pabedan, Pazaungdaung, and Seikkan. The urban central activities such as administration, commerce, business and banking etc., are mainly located in CBD. The population of CBD was 245,530 in 1983 and increased to 321,922 in 2003, which has been expected to increase in 311,752 in 2010 and 357,709 in 2020 (Moe, 2009). The shopping centers are opened around those townships and their names are Ga Mon Pwint (II), East Point Shopping Center, Ruby Mart, Junction City, Junction (Maw Tin) and City Mall St. John. The data will be collected in three weeks in the month of May during the weekday and weekend with three periods of time in a day; from 9 - 12 AM, 13 - 16 PM and 17- 19 PM.



Source: File: Yangon Districts and Townships. png (Jemerias, 2014)

Figure 3.1 Central Business District (CBD) in Yangon

**Table 3.6** Schedule for Collecting the Questionnaires

No.	Names of the Shopping Centers	Number of Respondents	Time	Date
1.	Ga Mone Pwint (II)	64	9 - 12 AM	Weekday and
1.	ou mone i wint (ii)		13 - 16 PM	Weekend
			17- 19 PM	
2.	Ruby Mart	64	9 - 12 AM	Weekday and
			13 - 16 PM	Weekend
			17- 19 PM	
3.	East Point Shopping Center	64	9 - 12 AM	Weekday and
			13 - 16 PM	Weekend
			17- 19 PM	
4.	Junction City	64	9 - 12 AM	Weekday and
			13 - 16 PM	Weekend
			17- 19 PM	
5.	Junction (Maw Tin)	64	9 - 12 AM	Weekday and
			13 - 16 PM	Weekend
			17- 19 PM	
6.	City Mall St. John	64	9 - 12 AM	Weekday and
			13 - 16 PM	Weekend
			17- 19 PM	

#### 3.2.4 Data Analysis

There are four variables in this study which are the demographics of dental care patients, service quality of dental care, patient satisfaction, trust and loyalty. The five-point Likert scale is applied to measure the level of patient satisfaction towards the quality of dental care services. Interval with five-point scale will be calculated using this formula which is "(5-1)/5 = 0.80". By that calculation, the range of the score will be falling as follows:

- 4-5 is considered as strongly agree
- 3 4 is considered as agree
- 2-3 is considered as neutral
- 1-2 is considered as disagree

#### 0-1 is considered as strongly disagree

In this study, all the data will be collected and analyzed with descriptive statistic to evaluate the items of each variable. Frequencies and percentage will be resulted for the analysis of questionnaire Part 1 "demographics" such as age, genders, monthly income and number of times for visiting to the dental clinic. Means and standard deviation will be resulted for the analysis of Part 2 "service quality", Part 3 "patient satisfaction", Part 4 "trust" and Part 5 "loyalty".

Then, relationship among the variables will be analyzed with inferential statistic. Concerning with statistical analysis, multiple regression will be used for the test of the relationship between service quality, patient satisfaction, trust and loyalty. The collected data will be analyzed using SPSS computer software with version 21.

#### 3.3 Reliability Analysis

As the pilot research instrument, the reliability analysis will be carried out with 50 questionnaire sampling collected from the respondents coming to the Ga Mone Pwint (II) shopping center in the central business district of Yangon. Further data collection will be carried out after the reliability and stability of the questionnaire for each variable are sure. Cronbach's alpha,  $\alpha$  (or *coefficient alpha*), developed by Lee Cronbach in 1951, measures reliability, or internal consistency of questionnaires measured for the study to see those questionnaire surveys are reliable (Tavakol and Dennick, 2011). A high level for alpha may mean that the items in the questionnaires are highly correlated. The value range of the alpha is shown in the table 3.3 as following,

Table 3.7 Cronbach's Alpha Index

Cronbach's alpha	Internal consistency
$\alpha \ge 0.9$	Excellent
$0.9 > \alpha \ge 0.8$	Good
$0.8 > \alpha \ge 0.7$	Acceptable
$0.7 > \alpha \ge 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

All of respondents can complete the questionnaire within 10 minutes, and the result of Cronbach's Alpha test for 50 questionnaires sampling is shown in table 3.3 (b) and all the variables get higher values of 0.90 to 0.95 as following;

Table 3.8 Reliability testing using Cronbach's Alpha

Items	Cronbach's Alpha	
<b>Quality of Dental Care Service</b>		0.985
Physical Structure		0.913
Staff Structure		0.892
Professionalism process		0.914
Interaction process		0.948
Reactivity process		0.951
Administration process		0.930
Outcomes of the service		0.924
Patient Satisfaction		0.958
Trust		0.972
Loyalty		0.972

#### **CHAPTER 4**

#### DATA ANALYSIS AND RESULTS

This chapter presents the results of the primary research data analysis which is obtained from the questionnaires designed based on the conceptual framework in chapter (3). Then, using the statistical tools, the hypotheses of this study will be tested in order to prove the objectives of the study. Descriptive statistic is used to explain the background information by presenting frequency and percentage. Inferential statistic is used with multiple regression analysis to analyze the independent and dependent variables of the study. The data analysis will be done with 430 questionnaires collected from the respondents and the results of the analysis will be explained as following:

- 4.1 Background Information
  - 4.1.1 Demographic Information of Respondents
  - 4.1.2 Behavior Information Relating to Dental Clinic of Respondents
- 4.2 The Level of Agreement Towards Quality of Dental Care Service
- 4.3 The Level of Agreement Towards Patient Satisfaction
- 4.4 The Level of Agreement Towards Trust
- 4.5 The Level of Agreement Towards Loyalty
- 4.6 Inferential Statistic Analysis
  - 4.6.1 Quality of Dental Care Service Has Positive Influence on Patient

Satisfaction

- 4.6.2 Patient Satisfaction Has Positive Influence on Trust
- 4.6.3 Patient Satisfaction Has Positive Influence on Loyalty
- 4.6.4 Trust Has Positive Influence on Loyalty
- 4.6.5 Quality of Dental Care Service Has Positive Influence on Loyalty
- 4.6.6 Quality of Dental Care Service, Patient Satisfaction and Trust Have Positive

  Influence on Loyalty
- 4.7 Summery of Hypothesis Testing
- 4.8 Additional Suggestions for Dental Care Service

## 4.1 Background Information

# **4.1.1 Demographic Information of Respondents**

**Table 4.1** Demographic Information of Respondents

Background Information	Items	Frequency	Percent
Gender	Males	132	30.7
	Females	298	69.3
Total		430	100.0
Age	20 or lower	17	4.0
J	21-30	154	35.8
	31-40	125	29.1
	41-50	71	16.5
	51 and above	63	14.7
Total		430	100.0
Education	High school and below	56	13.0
	Bachelor degree	305	70.9
	Master degree and above	69	16.0
Total		430	100.0
Income	below 250,000	211	49.1
	250,000-500,000	172	40.0
	500,001-800,000	28	6.5
	800,001 and above	19	4.4
Total		430	100.0
Residence	Yangon	358	83.1
	Mandalay	20	4.6
	Nay Pyi Daw	9	2.1
	Other	43	10.0
Total		430	100.0

Concerning with the demographic information of the respondents, this sector composes the information with "gender", "age", "education", "monthly income" and "residence". The questionnaire surveys have been answered by 430 respondents who are the patients receiving dental care services from the dental clinics in Yangon. Table 4.1(a) shows that there are 132 males of respondents which account for 30.7% and 298 females of respondents accounting for 69.3 %.

According to the data for age information, 16 respondents which represent 4.0 percent are the age between 20 years or lower, 54 respondents representing 35.8 are the age between 31-40 years, 125 respondents for 16.5 percent are between the age of 31-40 years, 71 respondents with 16.5 percent represent for the age range between 41-50 years and then, the age group of 51 years and above have 63 respondents representing 14.7 percent.

In term of education, the majority of education level of respondents is bachelor degree which has 305 respondents with 70.9 percent, the second group is the master degree and above which has 69 respondents with 16.0 percent and the last group is the high school and below by 56 respondents with 13.0 percent.

For the data analysis of income items, the majority of respondents is below 250,00 kyats which account for 49.1 percent, the second is between 250,001 – 500,00 kyats with 172 respondents accounting for 40.0 percent, the amount between 500,001 – 800,00 kyats is followed by the third with 28 respondents equal to 6.5 percent, and the amount 800,001 kyats and above is the last one by 19 respondents with 4.4 percent.

The items for the residence information show that the highest number of respondents can be seen in Yangon with 358 which is equal to 83.1 percent, 20 respondents from Mandalay with 4.6 percent, 9 respondents from Nay Pyi Daw with 2.1 percent, and the rest are from others from different residence in Myanmar with 10.0 percent.

#### 4.1.2 Behavior Information Relating to Dental Clinic of Respondents

 Table 4.2 Behavior Information Relating to Dental Clinic of Respondents

Background	Items	Frequency	Percent
Information			
Number of times	below one time	140	32.5
visiting to the clinic in	one time	131	30.4
a year	two times	84	19.5
	three times	39	9.0
	four times	10	2.3
	above four times	26	6.0
Total		430	100.0
How much do you	below 30,000	260	60.3
pay per visit?	30,000-50,000	113	26.2
	50,001-100,000	28	6.5
	100,001-300,000	18	4.2
	300,001-500,000	3	0.7
	Above 500,001	8	1.9
Total		430	100.0
How do you know the	Yangon Directory	26	6.0
clinic?	Clinical Directory	26	6.0
	Billboard	37	8.6
	Friend/ Family Recommendation	307	71.4
	Facebook	23	5.3
	Other	11	2.6
Total		430	100.0
What kind of	routine oral checkup and oral cleaning	119	27.7
treatment do you	cavity filling	196	45.6
normally get in the	tooth extraction	118	27.4
clinic?	dental prosthesis	45	10.4
	teeth whitening	26	6.0
	Dental braces	8	1.9
	Other	17	3.8

Regarding with the respondents' number of times visiting to the clinic in a year, there are 140 respondents with 32.5 percent for below one time, 131 respondents with 30.4 percent for one time, 84 respondents with 19.5 percent for two times, 39 respondents with 9.0 for three times, 10 respondents with 2.3 percent for four times, and last, more than four times shows 26 respondents with 6.0 percent.

Then, the higher number of respondents with 260 ones which accounts for 60.3 percent pays below 30,000 kyats per visit to the clinic, the second higher number with 113

respondents accounting for 26.2 pays between 30,000 - 50,000 kyats, the third one with 28 respondents accounting for 6.5 percent pay between 50,001 - 100,000 kyats, 3 respondents with .7 percent pays between 300,001 - 500,000 kyats, and 8 respondents with 1.9 percent pay above 500,000 kyats.

Most of the respondents know the dental clinics from friends or family recommendation which represents for 307 ones with 71.4 percent, 37 respondents with 8.6 percent shows that they know the clinics by the billboard, the same numbers of respondents representing 26 with 6.0 percent know the clinics through Yangon directory and clinical directory, the social media Facebook stands for 23 respondents with 5.3 percent while 11 respondents with 2.6 percent know the clinics by other ways.

For the data concerning with the information about kinds of treatment that the respondents normally get in the clinics, the highest number shows for cavity filling with 196 respondents equivalent to 45.6 percent, which is followed by the number of routine oral checkup and oral cleaning with 119 respondents equivalent to 27.7 percent, which is followed by the number of tooth extraction with 118 respondents equivalent to 27.4 percent while there are only 45 respondents with 10.4 percent for dental prosthesis, 8 respondents with 1.9 percent for dental braces and the rest 17 respondents shows 3.8 percent of other treatments.

### 4.2 The Level of Agreement Towards Quality of Dental Care Service

The agreement levels of the respondents on each variable concerning with dental care service quality, patient satisfaction, trust and loyalty will be decided by five-points Likert scale with the value of the mean 3.41 - 4.20 revealing the agreed level on each variable.

**Table 4.3** The Level of Agreement Towards Quality of Dental Care Service

Quality of Dental Care	Measurement	Mean	Standard Deviation	Level of Agreement
Service				C
Physical	1. The clinic has provided treatment through sterilization of instruments.	4.05	0.798	Agree
Structure	2. The clinic has cleaned and hygienic appearance.	3.98	0.828	Agree
	3. The clinic is located in convenient arrival.	3.94	0.897	Agree
	4. The clinic uses State-of-art equipment.	3.83	0.877	Agree
	5. The clinic has visually appealing facilities.	3.70	0.903	Agree
Total		3.90	0.71	Agree
Staff Structure	1. The dentist in the clinic has good reputation.	3.93	0.878	Agree
	2. The staff in the clinic is well dressed.	3.84	0.872	Agree
	3. The clinic has sufficient dentist.	9.73	0.945	Agree
Total		3.83	0.78	Agree
Professionalism	1. The dentist in the clinic looks over the teeth actively.	4.15	0.753	Agree
Process	2. The dentist in the clinic provides to subside pain during treatment.	4.09	0.799	Agree
	3. The dentist in the clinic has clean and neat appearance.	4.05	0.803	Agree
Total	••	4.1	0.72	Agree
Interaction	1. The dentist in the clinic is reliable in oral health instruction.	4.05	0.825	Agree
Process	2. The dentist in the clinic explains diagnosis and treatment intimately.	3.94	0.863	Agree
	3. The dentist concerns patient's questions and worries.	3.93	0.840	Agree
	4. The staff in the clinic treats with courtesy.	3.84	0.864	Agree
Total	·	3.94	0.75	Agree
Reactivity	1. The staff and dentist of the clinic have good service attitude.	3.85	0.860	Agree
Process	2. The staff and the dentist provide prompt patient service.	3.74	0.869	Agree
	3. The staff in the clinic shows sympathetic attitude.	3.66	0.901	Agree
	4. The clinic can perform effectiveness in handling patient complaints.	3.61	0.921	Agree
Total		3.71	0.8	Agree
Administration	The clinic has clearly stated item charge list.	3.99	0.888	Agree
Process	2. The clinic is easy to make appointment.	3.88	0.902	Agree
	3. The clinic is soliciting of patient options.	3.75	0.879	Agree
	4. The dentist meets patients on time.	3.62	0.958	Agree
Total		3.81	0.75	Agree
Outcomes of the	I feel pain relief after treatment.	4.02	0.781	Agree
Service	2. I have more confidence after treatment.	3.98	0.836	Agree
	3. I think the fee for dental services in the clinic is acceptable.	3.85	0.951	Agree
Total	•	3.95	0.77	Agree

Table 4.3 shows the values of mean, standard deviation and the level of agreement for each dimension of service quality (physical structure, staff structure, professionalism process, interaction process, reactivity process, administration process and outcomes of the service). First of all, for physical structure, the results show that respondents most agreed on "the clinic has provided treatment through sterilization of instruments" (mean= 4.05),

the second most agreed on "the clinic has clean and hygienic appearance" (mean= 3.98), the third most agreed on "the clinic is located in convenient arrival" (mean= 3.94) and then statements rank as the last two in terms of mean values are "the clinic uses State-of-art equipment" (mean= 3.83) and "the clinic has visually appealing facilities" (mean= 3.70).

Secondly, for staff structure, the results show that respondents most agreed on "the dentist in the clinics has good reputation" (mean= 3.93), the second most agreed on "the staff in the clinics is well dressed" (mean= 3.84) and then, agreed on "the clinic has sufficient dentist" (mean= 3.73).

Thirdly, for professionalism process, the results show that respondents most agreed on "the dentist in the clinics looks over the teeth actively" (mean= 4.15), the second most agreed on "the dentist in the clinic provides to subside pain during treatment" (mean= 4.09) and the last agreed on "the dentist in the clinic has clean and neat appearance" (mean= 4.05).

Fourthly, for interaction process, the results show that respondents most agreed on "the dentist in the clinic is reliable in oral health instruction" (mean= 4.05), the second most agreed on "the dentist in the clinic explains diagnosis and treatment intimately" (mean= 3.93), the third most agree on "the dentist concerns patient's questions and worries" (mean= 3.93) and then agreed on "the staff in the clinic treats with courtesy" (mean= 3.84).

Moreover, for administration process, the results show that respondents most agreed on "the clinic has clearly stated item charge list" (mean= 3.99), the second most agreed on "the clinic is easy to make appointment" (mean= 3.88) and then statements rank as the last two in terms of mean values are "the clinic is soliciting of patient options" (mean= 3.75) and "the dentist meets patients on time" (mean=3.62).

Finally, for outcomes of the services, the results show that respondents most agreed on "I feel pain relief after treatment" (mean= 4.02), the second most agreed on "I have more confidence after treatment" (mean= 3.98) and the last most agree on "I think the fee for dental services in the clinic is acceptable" (mean= 3.85).

In summary, in regarding with the agreement levels of respondents for the service quality of dental care, the items that respondents most agree on is "professionalism process" (mean= 4.1), the second most agree on "outcomes of the services" (mean= 3.95), the third most agree on "interaction process" (mean= 3.94) and then agreed on "physical structure" (mean= 3.9). The statements rank as the last three in terms of mean values are "staff structure" (mean=3.83), "administration process" (mean= 3.81) and "reactivity process" (mean= 3.71).

### 4.3 The Level of Agreement Towards Patient Satisfaction

Table 4.4 The Level of Agreement Towards Patient Satisfaction

Measurement	Mean	Standard Deviation	Level of Agreement
I am satisfied with the professional competence of the dentist in the clinic.	4.00	0.856	Agree
I am satisfied my decision to choose the dental care services provided in the clinic.	3.93	0.829	Agree
I have good experience with the services of the clinic.	3.87	0.816	Agree
I am satisfied with the overall services of the clinic.	3.83	0.816	Agree
The services in the clinic completely meet my expectations.	3.71	0.865	Agree
Total	3.86	0.75	Agree

According to table 4.4, the results show that respondents most agreed on "I am satisfied with the professional competence of the dentist in the clinic" (mean 4.00), the second most agreed on "I am satisfied my decision to choose the dental care services provided in the clinic" (mean= 3.93), the third most agreed on "I have good experience with the services of the clinic" (mean= 3.87) and then, statements rank as the last two in terms of mean values are "I am satisfied with the overall services of the clinic" (mean= 3.83) and "the services in the clinic completely meet my expectations" (mean= 3.71).

#### **4.4** The Level of Agreement Towards Trust

**Table 4.5** The Level of Agreement Towards Trust

Measurement	Mean	Standard Deviation	Level of Agreement
I trust the dentist in the clinic.	4.02	0.809	Agree
The clinic treats me fairly.	3.93	0.828	Agree
The service quality provided in the clinic is reliable.	3.91	0.820	Agree
I feel secure when I use dental care services in the clinic.	3.90	0.833	Agree
I have full confidence with the service provided in the clinic.	3.88	0.825	Agree
Total	3.92	0.760	Agree

From table 4.5, the results show that respondents most agreed on "I trust the dentist in the clinic" (mean= 4.02), the second most agreed on "The clinic treats me fairly" (mean=3.93), the third most agreed on "The service quality provided in the clinic is reliable" (mean= 3.91) and then, statements rank as the last two in terms of mean values are "I feel secure when I use dental care services in the clinic" (mean= 3.90) and "I have full confidence with the service provided in the clinic" (mean= 3.88).

#### 4.5 The Level of Agreement Towards Loyalty

**Table 4.6** The Level of Agreement Towards Loyalty

Measurement	Mean	Standard Deviation	Level of Agreement
I will tell others about good things of the services provided in the	3.91	0.881	Agree
clinic.			
When I am thinking about dental care services, I always make the	3.88	0.888	Agree
decision to use the services provided in the clinic.			
I will recommend my friends and relatives to use the services provided	3.87	0.846	Agree
in the clinic.			
I intend continuing being a customer to use the services provided in the	3.80	0.887	Agree
clinic.			
I feel a sense of loyalty to the services provided in the clinic.	3.71	0.946	Agree
Total	3.83	0.820	Agree

From table 4.6, the results show that respondents most agreed on "I will tell others about good things of the services provided in the clinic" (mean= 3.91), the second moat agreed on "When I am thinking about dental care services, I always make the decision to

use the services provided in the clinic" (mean= 3.88), the third most agreed on "I will recommend my friends and relatives to use the services provided in the clinic" (mean= 3.87) and then, statements rank as the last two in terms of mean values are "I intend continuing being a customer to use the services provided in the clinic" (mean= 3.80) and "I feel a sense of loyalty to the services provided in the clinic" (mean= 3.71).

#### **4.6 Inferential Statistic Analysis**

# 4.6.1 Hypothesis 1: Quality of Dental Care Service has Positive Influence on Patient Satisfaction

**Table 4.7** R Square (Model Summary)

Model	R Square
1	0.805

a. Predictors (Constant): structure, process, outcomes of the service

From the table 4.7, the linear regression explains 80.5 % of the variance in the data by the value of R Square (R Square=.805). This means that all variables of "X" (the service quality) in the model can be able to predict variable "Y" (the patient satisfaction) for 80.5%.

**Table 4.8** ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	195.808	3	65.269	587.965	0.000
Residual	47.290	426	0.111		
Total	243.098	429			

- a. Dependent variables: patient satisfaction
- b. Predictors (Constant): structure, process, outcomes of the service

As table 4.8 shown, the ANOVA table appears Sig.= .000 which means these three independent variables of the service quality (structure, process and outcome) have least one variable effect dependent variable "patient satisfaction".

**Table 4.9** Coefficient

Model	Unstandardized Coefficients B	Standardized Coefficients Beta	Sig
(Constant)	0.054		0.573
Structure	0.091	0.084	0.042
Process	0.507	0.468	0.000
Outcome	0.379	0.389	0.000

a: Dependent variables: Patient Satisfaction

In the above table 4.9, this paper's variables will be abbreviated as: PS for patient satisfaction, S for structure, P for process and O for outcomes of the service. The Sig. values of each variable can be seen as Structure (Sig.= .042), Process (Sig.= .000) and Outcomes of the service (Sig.= .000). Based on the analysis result below shown, the equation of patient satisfaction will be written as;

$$PS = 0.054 + 0.091S + 0.507P + 0.379O$$
 (2)

# 4.6.2 Hypothesis 2: Quality of Dental Care Service has Positive Influence on Trust

**Table 4.10** R Square (Model Summary)

Model	R Square
1	0.769

a. Predictors (Constant): structure, process, outcome

From the table 4.10, the linear regression explains 76.9 % of the variance in the data by the value of R Square (R Square= .769). This means that all variables of "X" (the service quality) in the model can be able to predict variable "Y" (trust) for 76.9%.

**Table 4.11** ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	188.970	3	62.990	471.661	0.000
Residual	56.892	426	0.134		
Total	245.862	429			

- a. Dependent variables: trust
- b. Predictors (Constant): structure, process, outcome

As table 4.11 shown, the ANOVA table appears Sig.= .000 which means these three independent variables of the service quality (structure, process and outcome) have least one variable effect dependent variable "trust".

**Table 4.12** Coefficient

Model	Unstandardized Coefficients	Standardized Coefficients	Sig
	В	Beta	
(Constant)	0.155		0.137
Structure	0.144	0.131	0.004
Process	0.478	0.439	0.000
Outcome	0.346	0.353	0.000

a: Dependent variables: trust

In the above table 4.12, this paper's variables will be abbreviated as: T for trust, S for structure, P for process and O for outcomes of the service. The Sig. values of each variable can be seen as Structure (Sig.= .004), Process (Sig.= .000) and Outcomes of the service (Sig.= .000). Based on the analysis result below shown, the equation of trust will be written as:

$$T = 0.155 + 0.144S + 0.478P + 0.346O$$
 (3)

#### 4.6.3 Hypothesis 3: Patient Satisfaction has Positive Influence on Loyalty

 Table 4.13 R Square (Model Summary)

Model	R Square
1	0.718

a. Predictors (Constant): patient satisfaction

From the table 4.13, the linear regression explains 71.8 % of the variance in the data by the value of R Square (R Square= .718). This means that the variable of "X" (patient satisfaction) in the model can be able to predict variable "Y" (loyalty) for 71.8%.

**Table 4.14** ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	205.009	1	205.009	1090.958	0.000
Residual	80.428	428	0.188		
Total	285.437	429			_

- a. Dependent variables: loyalty
- b. Predictors (Constant): patient satisfaction

As table 4.14 shown, the ANOVA table appears Sig.= .000 which means the independent variables of patient satisfaction have affect dependent variable loyalty.

**Table 4.15** Coefficient

Model	Unstandardized Coefficients	Standardized Coefficients	Sig
	В	Beta	
(Constant)	0.284		0.010
Patient Satisfaction	0.918	0.847	0.000

a: Dependent variables: loyalty

In the above table 4.15, this paper's variables will be abbreviated as: L for loyalty and PS for patient satisfaction. The Sig. values of Patient Satisfaction is .000 (Sig.= .000). Based on the analysis result below shown, the equation of loyalty will be written as;

$$L = 0.284 + 0.918PS \tag{4}$$

## 4.6.4 Hypothesis 4: Trust has Positive Influence on Loyalty

**Table 4.16** R Square (Model Summary)

Model	R Square
1	0.765

a. Predictors (Constant): trust

From the table 4.16, the linear regression explains 76.5 % of the variance in the data by the value of R Square (R Square= .765). This means that the variable of trust in the model can be able to predict variable loyalty for 76.5%.

**Table 4.17** ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	218.367	1	218.367	1393.502	0.000
Residual	67.069	428	0.157		
Total	285.437	429			

a. Dependent variables: loyalty

b. Predictors (Constant): trust

As table 4.17 shown, ANOVA table appears the value of Sig.= .000 which is lower than the significant value Sig.< 0.05, indicating that the variable of trust has effect variable of loyalty.

**Table 4.18** Coefficient

Model	Unstandardized Coefficients	Standardized Coefficients	Sig
	В	Beta	
(Constant)	0.132		0.191
Trust	0.942	0.875	0.000

a: Dependent variables: loyalty

According to the result from Table 4.18, the variables of the paper have abbreviated as: L is for loyalty and T is for trust. Then, the Sig value of "trust" is shown as Sig.=.000. Based on the analysis result above shown, the paper written the equation of loyalty as;

$$L = .132 + .942T \tag{5}$$

**4.6.5** Hypothesis **5:** Quality of Dental Care Service has Positive Influence on Loyalty **Table 4.19** R Square (Model Summary)

Model	R Square
1	0.716

a. Predictors (Constant): structure, process, outcome

From the table 4.19, the linear regression explains 71.6 % of the variance in the data by the value of R Square (R Square= .716). This means that all variables of "X" (service quality) in the model can be able to predict variable "Y" (loyalty) for 71.6%.

Table 4.20 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	204.314	3	68.105	357.689	0.000
Residual	81.123	426	.190		
Total	285.437	429			_

- a. Dependent variables: loyalty
- b. Predictors (Constant): structure, process, outcomes of the service

As table 4.20 shown, the ANOVA table appears Sig.= .000 which means these three independent variables of the service quality (structure, process and outcome) have least one variable effect dependent variable "loyalty".

Table 4.21 Coefficient

Model	Unstandardized Coefficients B	Standardized Coefficients Beta	Sig
(Constant)	0.088		0.480
Structure	0.170	0.144	0.004
Process	0.446	0.380	0.000
Outcome	0.388	0.368	0.000

a: Dependent variables: loyalty

In the above table 4.21, this paper's variables will be abbreviated as: L for loyalty, S for structure, P for process and OS for outcomes of the service. The Sig. values of each variable can be seen as Structure (Sig.= .004), Process (Sig.= .000) and Outcomes of the service (Sig.= .000). Based on the analysis result below shown, the equation of Loyalty will be written as;

$$L = 0.088 + 0.170S + 0.446P + 0.388O$$
 (6)

# 4.6.6 Hypothesis 6: Quality of Dental Care Service, Patient Satisfaction and Trust have Positive Influence on Loyalty

**Table 4.22** R Square (Model Summary)

Model	R Square
1	0.796

b. Predictors (Constant): service quality of dental care, patient satisfaction and trust

From the table 4.22, the linear regression explains 79.6 % of the variance in the data by the value of R Square (R Square= .796). This means that all variables of "X" (service quality of dental care, patient satisfaction and trust) in the model can be able to predict variable "Y" (loyalty) for 79.6%.

Table 4.23 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	227.327	3	75.776	555.513	0.000
Residual	58.109	426	0.136		
Total	285.437	429			

- c. Dependent variables: loyalty
- d. Predictors (Constant): service quality of dental care, patient satisfaction, trust

As table 4.23 shown, the ANOVA table appears Sig.= .000 which means these three independent variables of the service quality of dental care, patient satisfaction and trust have least one variable effect dependent variable "loyalty".

Table 4.24 Coefficient

Model	Unstandardized	Standardized	Sig
	Coefficients	Coefficients	
	В	Beta	
(Constant)	0.182	•	0.084
Service quality of dental care	0.254	0.209	0.000
Patient satisfaction	0.239	0.221	0.000
Trust	0.536	0.498	0.000

a: Dependent variables: loyalty

In the above table 4.24, this paper's variables will be abbreviated as: L for loyalty, SQ for service quality of dental care, PS for patient satisfaction and T for trust. The Sig. values of each variable can be seen as Service Quality of dental care (Sig.= .000), Patient Satisfaction (Sig.= .000) and Trust (Sig.= .000). Based on the analysis result below shown, the equation of loyalty will be written as;

$$L = 0.182 + 0.254SQ + 0.239PS + 0.536T$$
(7)

# 1.7 Summary of Hypothesis Testing

In summary, the results of hypothesis testing are analyzed on the quality of dental care service, patient satisfaction, trust and loyalty.

**Table 4.25** Summary for All Hypotheses

No.	Hypothesis	Conclusion	Result
H 1	Quality of dental care service has positive influence on patient satisfaction.	Positive effect	Accepted
H 2	Quality of dental care service has positive influence on patient trust.	Positive effect	Accepted
Н3	Patient satisfaction has positive influence on patient loyalty.	Positive effect	Accepted
H 4	Patient trust has positive influence on patient loyalty.	Positive effect	Accepted
H 5	Quality of dental care service has positive influence on patient loyalty.	Positive effect	Accepted
H 6	Quality of dental care service, patient satisfaction and trust have positive influence on loyalty.	Positive effect	Accepted

# 4.8 Additional Suggestions for Dental Care Service

Some of the respondents have given their suggestions after answering the questionnaires as follows;

# Physical Structure

- Car parking and reception should include as important customer service.
- Every dental clinic should keep sterilization of instruments in clean and hygienic condition.
- Sofa and toilet in the clinic are not comfortable.
- State-of-the-art equipment should be concerned as important factor in the clinic.

#### **Administration Process**

- The dentists should meet patients on time.
- The dentists must be competence of knowledge.

#### **Interaction Process**

- Reliable treatment should be provided to patients.
- The dentists should treat patients patiently.

# **Reactivity Process**

- The dentists should show sympathetic attitude towards patients' pain.
- The dentists need to show grate gratitude towards the patients for using the dental care services in the clinic.
- The dentists must be caring and amicable to the patients.

# Other Suggestions

- Dental care services are expensive.
- Everyone should do oral checkup at least once in every six months.
- In some places of Myanmar like Kawtaung City, the services in the private clinics are needed to improve and develop.
- The clinic should provide the best service to the patients regardless of the cost.
- The dental clinic should include free oral care education program to the patients
  as on one of the services. Then, well and careful treatment should be provided
  with reasonable price.

#### **CHAPTER 5**

# CONCLUSION, DISCUSSION AND RECOMMENDATION

This chapter presents the results of the research, summary, discussion of the findings and recommendation based on the research objectives studying the service quality factors influencing patient satisfaction, trust and loyalty towards dental care services in Yangon, Myanmar. The topics of this chapter are as follow;

- 5.1 Conclusion
- 5.2 Discussion
  - 5.2.1 Quality of Dental Care Service has Positive Influence on Patient
    Satisfaction
  - 5.2.2 Patient Satisfaction has Positive Influence on Trust
  - 5.2.3 Patient Satisfaction has Positive Influence on Loyalty
  - 5.2.4 Trust has Positive Influence on Loyalty
  - 5.2.5 Quality of Dental Care Service has Positive Influence on Loyalty
- 5.3 Limitation of the Study
- 5.4 Recommendations

#### 5.1 Conclusion

The purpose of this study is to investigate quality of dental care service factors affecting patient satisfaction, trust and loyalty and then, the influences among those variables will be identified. A total number of 430 questionnaires, in which five parts with fifty-one statements, were collected from the respondents using dental care services in Yangon. After that, all the data has been analyzed with multiple regression by SPSS (Statistical Package for the Social Sciences) software.

First of all, according to the demographic information of respondents, it is found out that females are the most participants in the survey by 69.3 % while males are participated by 30.7 %. The majority of respondents for age category is 21 – 30 years with 35.8 % which is also close to the second most one for 31 – 40 years with 29.1 %. Most of the respondents are bachelor degree by 70.9%, their incomes show below 250,000 kyats by 49.1% and 250,001 – 500,00 kyats by 40% of the respondents. The residence of majority respondents is from Yangon by 83.3 % which is a huge higher proportion than other items of residence like Mandalay, Nay Pyi Daw and other.

Then, relating to the behavior information about the dental clinic of respondents, for number of times visiting to the clinic in a year, most of the respondents answered for below one time by 32.6 % and one time by 30.5 %. Mostly, they pay per visit for below 30,000 kyats by 60.5 % and 30,001 – 50,000 kyats by 26.3 %. When the respondents were asked how do they know the clinic, 71.4 % of respondents have answered that they know the clinics from friend/family recommendation. Concerning with the treatment that respondents normally get in the clinics, cavity filling shows the highest proportion with

45.6 % of respondents, followed by the routine oral checkup and oral cleaning with 27.7 % and then by the tooth extraction with 27.4 %.

In addition to, the results of the data will be summarized based on the objectives of the study as follows;

Objective 1: To examine quality of dental care service

The quality of dental care service consists three dimensions which are structure, process and outcomes of the service. There are two items in structure (physical and staff) and four items in process (Professionalism, Interaction, reactivity and administration). All of the items are agreed by the respondents at the level of agreement as described in chapter (4). Among all the items of measurement, respondents are most agreed on professionalism process, the second most agreed on outcomes of the services, the third most agreed on interaction process and next, agreed on physical structure and next. The last three items that most respondents agreed on are staff structure, administration process and reactivity process. Moreover, all of the measurement factors for seven items are shown at agree level per description in chapter (4).

Objective 2: To examine patient satisfaction of dental care

From the statistics analysis in chapter (4), the study reveals that patient satisfaction is found at the agree level and all the measurements of patient satisfaction are also shown at the agree level. Patients are most satisfied with the professionalism competence of the dentist in the clinic, the second most satisfied with their decision choosing the dental care services provided in the clinic, the third most satisfied with the good experience with the services in the clinic and then satisfied with the overall services of the clinic. For the last

satisfied factor, patients are satisfied with the services in the clinic completely for meeting their expectations.

Objective 3: To examine patient trust and loyalty of dental care

From the statistics analysis in chapter (4), the study shows that all of the factors for the measurement for trust and loyalty are recognized as the agreed level. Patient trust is measured with five factors. Among them, the most agreed one is that patients trust the dentists in the clinics and the second most agreed is that the clinics treat them fairly. For the third agreement level, patients agreed that the service quality provided in the clinic is reliable and the fourth agree one is that they feel secure when using dental care services in the clinic.

There are five factors in measuring patient loyalty. From the statistical analysis in chapter (4), loyal patients are most agreed with telling others about good things of the services provided in the clinic, the second most agreed with the decision to use the services provided in the clinic when they are thinking about dental care services, the third most agreed with recommending friends and relatives to use the services provided in the clinic, the fourth agree one with intending to continue being a customer to use the services provided in the clinic and the last agree one with feeling a sense of loyalty to the services provided in the clinic.

Objective 4: To identify the influence among quality of dental care service, patient satisfaction, trust and loyalty

Six hypotheses have been tested based on the conceptual framework in chapter (2) to identify the influence among quality of dental care service, patient satisfaction, trust and loyalty as follows;

First of all, "hypothesis 1: quality of dental care service has positive influence on patient satisfaction" has been accepted as three dimensions of dental care service quality (Structure, Process and Outcomes of the Service) appear Sig. This is because the Sig. values of Structure (Sig.= .042), Process (Sig.= .000) and Outcomes of the service (Sig.= .000) are lower than the significant value (Sig.< 0.05). The Bata value of structure ( $\beta$ = .084) means that service quality of structure has influence on patient satisfaction about 8.4% and the service quality of process ( $\beta$ = 0.468) has influence on patient satisfaction about 46.8% and then, quality for outcomes of the service ( $\beta$ = 0.389) has influence on patient satisfaction about 38.9%. This also tells that the service quality of process has more influence on patient satisfaction in the model. Next, the unstandardized B values of structure (B= 0.091), process (B= 0.507) and the outcomes of the service (B= 0.379) shows the positive relationship between service quality and patient satisfaction.

Secondly, "hypothesis 2: quality of dental care service has positive influence on patient trust" has been accepted as three dimensions of service quality (Structure, Process and Outcomes of the Service) appear Sig in the model. In other words, the Sig. values of Structure (Sig.= .004), Process (Sig.= .000) and Outcomes of the service (Sig.= .000) are less than "0.05" so that those dimensions of service quality are making significant contribution to influence on patient trust. From the standardized Bata values of structure ( $\beta$ = 0.131) meaning 13.1% of influence on trust, process ( $\beta$ = 0.439) meaning 43.9% of influence on trust and outcomes of the service ( $\beta$ = 0.353) meaning 35.3 % of influence on trust, it is shown that the service quality of process has more impact in the model. Then, the unstandardized B values of structure (B= 0.022), process (B= 0.478) and the outcomes

of the service (B= 0.346) shows the positive relationship between service quality and patient trust.

Thirdly, "hypothesis 3: patient satisfaction has positive influence on loyalty" has been accepted because trust (Sig.=.000, Sig. < 0.05) is significant influence on loyalty. the standardized Bata value of patient satisfaction ( $\beta$ = 0.847) describes that patient satisfaction has influence on patient trust about 84.7%. The unstandardized B value of patient satisfaction (B= 0.918) shows the positive relationship between patient satisfaction and trust.

Fourthly, "hypothesis 4: trust has positive influence on loyalty" has been accepted by the Sig. value of trust (Sig.=.000, Sig.< 0.05). the standardized Bata value of trust ( $\beta$ = 0.875) describes that trust has influence on loyalty about 87.5%. The unstandardized B value of trust (B= 0.942) shows the positive relationship between trust and loyalty.

Furthermore, "hypothesis 5: quality of dental care service has positive influence on loyalty" has been accepted as three dimensions of service quality (Structure, Process and Outcomes of the Service) appear Sig in the model. The Sig. values of Structure (Sig.= .004), Process (Sig.= .000) and Outcomes of the service (Sig.= .000) are less than "0.05" so that those dimensions of service quality are making significant contribution to influence on loyalty. From the standardized Bata values of structure ( $\beta$ = 0.144) meaning 14.4% of influence on trust, process ( $\beta$ = 0.380) meaning 48% of influence on trust and outcomes of the service ( $\beta$ = 0.368) meaning 36.8 % of influence on trust, it is shown that the service quality of process has more effect size on loyalty in the model. Then, the unstandardized B values of structure (B= 0.170), process (B= 0.446) and the outcomes of the service (B= 0.388) shows the positive relationship between service quality and loyalty.

Last but not least, "hypothesis 6: quality of dental care service, patient satisfaction and trust have positive influence on loyalty" has been accepted as the variables for quality of dental care service, patient satisfaction and trust appear Sig. in the model. The Sig. values for the Service Quality of dental care (Sig.= .000), Patient Satisfaction (Sig.= .000) and Trust (Sig.= .000) are less than "0.05" so that all of those variables are making significant contribution to influence on loyalty. From the standardized Bata values of the service quality of dental care ( $\beta$ = 0.209) meaning 20.9% of influence on loyalty, patient satisfaction ( $\beta$ = 0.221) meaning 22.1% of influence on loyalty and trust ( $\beta$ = 0.498) meaning 49.8% of influence on loyalty, it is shown that the variable of trust has more effect size on loyalty than that of the other two variables in the model. Then, the unstandardized B values of the service quality of dental care (B= 0.254), patient satisfaction (B= 0.239) and trust (B= 0.536) shows the positive relationship between the three variables and loyalty.

#### 5.2 Discussion

The results of this study have provided insights into quality of dental care service factors influencing patient satisfaction, trust and loyalty. In this part, the findings will be discussed and compared with previous studies.

## 5.2.1 Quality of Dental Care Service has Positive Influence on Patient Satisfaction

This study indicates that most of the respondents are agreed on all dimensions of service quality such as structure, process and outcomes of the service in receiving dental care services in the clinic. Moreover, it is shown in the result that quality of dental care service with those dimensions has positive influence on patient satisfaction. It means that, if the service quality of those dimensions is increased, patient satisfaction will be increased. From the literature review, the researchers Fenny, Asante and Hansen (2014) reported that

the Donabedian "structure–process–outcome" conceptual model provides a framework for assessing factors influencing patient satisfaction with quality of care. Furthermore, Donabedian (1988) proposed that outcomes of the service quality could show the improvement in the health status of the patients, their knowledge as well as their satisfaction with the healthcare services.

The finding in this study has also agreed with the idea of the relationship for the assessment of the quality of three-part-approach (Structure-process-outcomes) which means good structure should promote good process and in turn, good process should increase good outcomes (Donabedian, 1998). In the study, the influence on the patient satisfaction by the service quality of the process and outcomes of service are more significant than that of physical structure. That's why process and outcome are more important factors influencing patient satisfaction while structure of the quality such as physical facilities is another influence factor but less important (Andrus and Buchheister, 1985).

# 5.2.2 Quality of Dental Care Service has Positive Influence on Trust

Another finding of this study is that all of the dimensions concerning with the quality of dental care service have positive influence on trust. It means that, if the patients have received good service quality for those dimensions, those can increase the trust of patients. This finding supports the statement in previous studies that service quality is an important preliminary factor to customer trust (Coulter and Coulter, 2003) and then it also suggested that service quality has significantly positive influence on trust in their study (Ribbink et al.,2004; Eisingerich and Bell, 2007). Alrubaiee and Alkaaida (2011) also considered healthcare service quality to be a vital determinant of patient satisfaction and patient trust

based on the perception on the competence of healthcare service providers such as reliability and expertise which can influence patients' confidence in receiving their services.

As the finding of the study, the service quality of the process is the most significant predictor on patient trust, the second one is process and the last one is outcomes of the service. Therefore, the service quality with those dimensions can improve the patient trust in service providers of dental care.

#### 5.2.3 Patient Satisfaction has Positive Influence on Loyalty

The literature claims that loyalty occurs when the customers are satisfied with the service which make them keep purchasing on the products (Hashem and Ali, 2019). Kabu and Soniya (2017) describe that highly satisfied customers are more likely to become loyal ones than those who are merely satisfied. Amin and Nasharuddin (2013) confirmed that satisfaction plays in loyalty intention and similarly, patient satisfaction has direct impact on patient loyalty (Sutharjana et al, 2013). In this study, the result of this research also supported that patient satisfaction has positive influence on loyalty. In other words, if the patient satisfaction is increased, the loyalty is increased too. Continuously, the loyal patients will share good things about service to others, recommend it to others and consider being the primary choice in receiving the services (Lupiyoadi, 2001).

# 5.2.4 Trust has Positive Influence on Loyalty

The finding of this study shows that trust has positively influence on loyalty. It is consistent with the literature review of Ribbink et al., (2004) explaining that trust plays a role of influencing factor on loyalty when customers becomes the loyal one of the services received from the service provider to whom they feel secure and trust. Trust in the

healthcare context is associated with the healthcare error and patient safety (Alrubaiee and Alkaaida, 2011) so that this may lead the patients to stop using this service without getting trust on the services provided by the service providers of dental care. By the finding of this study, it means that if the patient trust is increased, the patient loyalty will be increased as well. Therefore, this study also highlights the fact the quality of dental care services and the service provider must be trusted by the patients to establish loyal customers and revisit the clinics (Suki, 2011). Furthermore, like the other variables in this study such as service quality and satisfaction, trust is another factor that can influence patient loyalty which is mentioned in some literature reviews (Zhou et al., 2017; Patawayati et al, 2013 and Lei and Jolibert, 2012).

# 5.2.5 Quality of Dental Care Service has Positive Influence on Loyalty

The literature claims that loyalty occurs when the customers are satisfied with the service which make them keep purchasing on the products (Hashem and Ali, 2019). Amin and Nasharuddin (2013) confirmed that satisfaction plays in loyalty intention and similarly, patient satisfaction has direct impact on patient loyalty (Sutharjana et al, 2013). Similarly, service quality of dental care with dimensions such as structure, process and outcomes of the service has positive influence on loyalty. The service quality of the process and outcomes of the service is more significant with loyalty than that of structure. However, though it ranked as the lowest among three dimensions, it still effects on loyalty which is also agreed by the respondents. Therefore, this study infers that the higher the quality of the dental care services, the higher the patient loyalty. As the loyal customers, they will spread good things about the service and the service provider (Kumar and Advani, 2005)

and then, they are going to recommend their friends and family members to purchase the service too (Iddrisu, 2011).

This finding is agreed by the previous study of Fatima et al., (2018) stating that the effect of healthcare service quality factors influence the patient's satisfaction that can help in building loyalty intentions in the private hospitals of Pakistan. Moreover, Hashem et al., (2019) concluded in their study that the quality level of dental clinics' services in Jordan has a statistically significant positive influence on patient loyalty.

#### **5.3** Limitation of the Study

From the study of the quality of dental care service factors influencing patient satisfaction, trust and loyalty, it appeared that the limitations have been issued as follows;

Firstly, the sampling group of this study is focused only in Yangon and the questionnaires were distributed to the random respondents coming to the shopping malls situated in central business district areas. Thus, the result might be questionable and luck of representing the whole population in Myanmar due to the relatively small sample size, and geographic limitation.

Secondly, constraint of time involved in distributing over 400 questionnaires to the respondents within a month from 26<sup>th</sup> May to 20<sup>th</sup> June, 2019. Moreover, a huge number of statements in the questionnaire survey made the respondents for time consuming in filling up them. Sometimes, the respondents were in a hurry and the answers to the questionnaire statements may not correspond to their current feeling and consequently, this may affect the actual result of this study. Depending on the different backgrounds of individual respondent, some understood the questionnaires while the other need more explanation for those questions.

This study is limited to a sample of private dental clinics in Yangon, Myanmar and therefore this study cannot fully represent to develop and applied to not only other health services but also other service industries apart from health care.

This study only focuses on the variable of service quality influencing variables patient satisfaction, trust and loyalty. There might be other variables affecting patient satisfaction, trust and loyalty.

This study only applies for the quantitative data analysis so that the results may be limited as they provide numerical description rather than detailed narrative and generally provide less elaborate account of respondents' perception.

Next, the research instruments were translated from English to Myanmar so that there is possibility to appear misunderstanding among the respondents to answer the real content of the questionnaires.

#### 5.4 Recommendation

This study provides clear understanding of the quality of dental care service factors influencing patient satisfaction, trust and loyalty in dental care service in Yangon, Myanmar. And, the following recommendations from this study will be distributed to the relevant stakeholders such as the dentists, the service providers, policy makers of the service industry, service sectors of the government and the future researchers.

First of all, the study shows that quality of dental care service with the dimensions of structure, process and outcomes of the service has significant positive influence on patient satisfaction, trust and loyalty. Therefore, all of the stakeholders have to make sure that the higher quality of dental care services are delivered to the patients in order to achieve patient satisfaction, trust and loyalty. The higher the service quality will lead to the higher

the patient satisfaction, trust and loyalty respectively. Therefore, the quality of dental care service items with physical, staff, professionalism, interaction, reactivity, administration and outcomes of the services must be improved in order to achieve patient satisfaction, trust and loyalty.

Among the dimension of structure, process and outcomes concerning with the quality of dental care service, the study shows that process is the most significant factor with patient satisfaction, trust and loyalty. Thus, it can be assumed that the four factors relating to the process such as professionalism, interaction, reactivity and administration are the most important factors on which all of the stakeholders are required to focus for the achievement of patient satisfaction, trust and loyalty. In other words, the higher the quality of process in delivering dental care services, the higher the patient satisfaction, trust and loyalty.

Moreover, patient trust has positively influence on loyalty. Thus, all the stakeholders need to focus on how to make sure that the dental care services they have provided are felt secure and reliable by the patients, the dentists in the clinic are trusted by the patients, the fees charged are acceptable by the patients and then, the patients feel confidence after the treatment.

Furthermore, patient satisfaction has positively influence on loyalty. Therefore, it is suggested to the stakeholders to measure the quality of dental care services with patient satisfaction. Patient satisfaction with the quality of dental care will lead to be the loyal patients by keep purchasing the service constantly and consequently, they will feel sense of loyalty for the services, tell the good things about the service, recommend friends and family to use the service.

Therefore, the result of this study can help dental care service providers, the dentists, the service providers, policy makers of the service industry, service sectors of the government in Yangon to enhance the quality of dental care services, develop patient satisfaction and trust and then, to maintain the loyal patients. Service providers can better understand how various factors of each variables such as service quality, patient satisfaction, trust and loyalty affect each other efficiently. By identifying strength and weaknesses of each variable influencing among each other, resources such as facilities, equipment, human resources and money can be allocated in enhancing dental care service quality which can lead to the advantages of patient satisfaction, trust and loyalty.

In addition to, based on the research limitation above, this study puts forward some proposals for the future researchers. This is because, the present study was confined to a single geographical area and hence, its results cannot be generalized to other countries. Moreover, this study focuses on patients from Yangon, and thus, the results may not be applicable to other regions. In future studies, more major cities should be included in region to generalize the results.

Then, the study was limited to a sample of private dental clinics in Yangon, Myanmar and therefore it can be developed and applied to other health services. And, this study only focused on the variable of service quality influencing variables patient satisfaction, trust and loyalty. There might be other variables affecting patient satisfaction, trust and loyalty. Therefore, future researcher may investigate more on variables relating to patient satisfaction, trust and loyalty in dental care service for deeper understanding.

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**APPENDICES** 

#### **APPENDIX (I): English Research Questionnaire**

A Study of Quality of Dental Care Service Factors Influencing Patient Satisfaction, Trust and Loyalty in Yangon, Myanmar.

# Dear participants,

My name is Eileen Htang. I am a student of the University of the Thai Chamber of Commerce, majoring in global MBA class, and conducting research on a study of service quality factors influencing patient satisfaction, trust and loyalty towards dental care services in Yangon, Myanmar. I hope you can help me to finish this questionnaire, which consists of five parts with 50 statements. Please indicate your level of agreement by placing a tick in the appropriate boxes. Your answers are very important to me and I sincerely appreciate for your support.

Please tick  $\sqrt{\ }$  in the box for the question below

"The clinic" mentioned in this questionnaire means "the clinic" you have recently visited".

## **Part 1 General Questions**

Personal Basic Information	Detail facts
1. Gender	<ul><li>□ Male</li><li>□ Female</li></ul>
2. Age	$\square \leq 20$ years old

	□ 21-30 years old
	□ 31-40 years old
	☐ 41-50 years old
	$\Box$ > 50 years old
3. Education	☐ High school or lower
	☐ Bachelor degree
	☐ Master degree or above
4. Monthly Income	☐ Less than 250,000 Kyats
	□ 250,000 - 500,000 Kyats
	□ 500,001 - 800,000 Kyats
	☐ More than 800,000 Kyats
5. Residence	□ Yangon
	☐ Mandalay
	□ Nay Pyi Daw
	☐ Other, please specify
6. Number of times visiting to the	☐ Less than one time
clinic in a year?	$\square$ one time
	☐ two times
	☐ three times
	☐ four times
	☐ more than four times
7. How much do you pay per	☐ Less than 30,000 Kyats
visit?	□ 30,000 – 50,000 Kyats

	□ 50,001- 100,000 Kyats
	□ 100,001- 300,000 Kyats
	□ 300,001- 500,000 Kyats
	☐ More than 500,001 Kyats
8. How do you know the clinic?	☐ Yangon directory
	☐ Clinical directory
	☐ Billboard
	☐ Friend/ Family Recommendation
	☐ Facebook
	☐ Other, please specify
9. What kind of treatment do you	☐ Routine oral checkup and oral cleaning
normally get in the clinic?	☐ Cavity filling
	☐ Tooth extraction
	☐ Dental prosthesis
	☐ Teeth whitening
	☐ Dental braces
	☐ Other, please specify

KaThe following statements are measured on a five-point scale. You are being asked to indicate your level of agreement or disagreement with each statement by indicating whether you: (5) strongly agree, (4) agree, (3) neutral, (2) disagree, (1) strongly disagree. "The clinic" mentioned in the questionnaire means "the clinic you have recently visited".

Part 2 Service Quality of Dental Care

Quality of Dental Care Service	Measurement	5	4	3	2	1
<b>Physical Structure</b>						
1.	The clinic uses State-of-art equipment.					
2.	The clinic has visually appealing facilities.					
3.	The clinic has cleaned and hygienic appearance.					
4.	The clinic has provided treatment through sterilization of instruments.					
5.	The clinic is located in convenient arrival.					
Staff Structure						
6.	The staff in the clinic is well dressed.					
7.	The clinic has sufficient dentist.					
8.	The dentist in the clinic has good reputation.					

Quality of Dental Care Service	Measurement		4	3	2	1
Professionalism Process 9.	The dentist in the clinic has clean and neat appearance.					
10.	The dentist in the clinic provides to subside pain during treatment.					
11.	The dentist in the clinic looks over the teeth actively.					
<b>Interaction Process</b>						
12.	The dentist in the clinic is reliable in oral health instruction.					
13.	The staff in the clinic treats with courtesy.					
14.	The dentist in the clinic explains diagnosis and treatment intimately.					
15.	The dentist concerns patient's questions and worries.					
Reactivity Process						
16.	The staff and the dentist provide prompt patient service.					
17.	The staff in the clinic shows sympathetic attitude towards patient's problems.					
18.	The clinic can perform effectiveness in handling patient complaints.					
Quality of Dental Care Service Measurement		5	4	3	2	1

19.	The staff and dentist of the clinic have good service attitude.			
Administration Process 20.	The dentist meets patients on time.			
21.	The clinic is soliciting of patient options.			
22.	The clinic is easy to make appointment.			
23.	The clinic has clearly stated item charge list.			
Outcomes of the services 23.	I feel pain relief after treatment.			
24.	I have more confidence after treatment.			
25.	I think the fee for dental services in the clinic is acceptable.			

# **Part 3 Patient Satisfaction**

<b>Patient Satisfaction</b>	Measurement	5	4	3	2	1
1.	I am satisfied with my decision to choose the dental care services provided in the clinic.					
2.	I am satisfied with the professional competence of the dentist in the clinic.					
3	The services in the clinic completely meet my expectations.					
<b>Patient Satisfaction</b>	Measurement	5	4	3	2	1
4.	I am satisfied with the overall services of the clinic.					
5.	I have good experience with the services of the clinic.					

# **Part 4 Trust**

Trust	Measurement	5	4	3	2	1
1.	I feel secure when I use dental care services in the clinic.					
2.	I trust the dentist in the clinic.					
3.	The service quality provided in the clinic is reliable.					
4.	The clinic treats me fairly.					
5.	I have full confidence with the services provided in the clinic.					

Part 5 Loyalty

Loyalty	Measurement	5	4	3	2	1
1.	I intend continuing being a customer to use the services provided in the clinic.					
2.	I will recommend my friends and relatives to use the services provided in the clinic.					
Loyalty	Measurement	5	4	3	2	1
3.	I will tell others about good things of the services provided in the clinic.					
4.	When I am thinking about dental care services, I always make the decision to use the services provided in the clinic.					
5.	I feel a sense of loyalty to the services provided in the clinic.					

Othe	er sugge	estions y	ou may l	have			

Thank you for your time and cooperation!

#### APPENDIX (II): Myanmar Research Questionnaire

စစ်တမ်းမေခွန်းလွှာအား ပါဝင်ဖြေဆိုပေးကြမည့် ချစ်ခင်လေးစားရပါသော လူကြီးမိဘများနှင့် မိတ်ဆွေ များရှင့်

ကျွန်မ၏ အမည်မှာ အိုင်လင်းထန်း ဟုခေါ်ပါသည်။ ကျွန်မသည် ထိုင်းနိုင်ငံ၊ ဘန်ကောက် မြို့၌ ဖွင့်လှစ်ထားသည့် University of Thai Chamber of Commerce တွင် စီးပွားရေး စီမံခန့်ခွဲ မှုဆိုင်ရာ မဟာတန်း တက်ရောက်နေသော ကျောင်းသူတစ်ဦး ဖြစ်ပါသည်။ မဟာတန်း၏ လိုအပ် ချက်အရ ကျွန်မအနေဖြင့် မြန်မာနိုင်ငံ၊ ရန်ကုန်မြို့ရှိ သွားကျန်းမာရေး စောင့်ရှောက်ပြုစုခြင်း ဝန်ဆောင်မှုများနှင့် စပ်လျဉ်း၍ သုတေသနပြုလုပ်လျှက် ရှိပါသည်။ ယခုအခါတွင် အဆိုပါ ပန်ဆောင်မှုများအပေါ် လူနာ များ၏ စိတ်ကျေနပ်မှု၊ ယုံကြည်မှု၊ သစ္စာမြဲခြင်းတို့အား လွှမ်းမိုးစေ နိုင်သည့် ဝန်ဆောင်မှု အရည်အ သွေးအချက်များအား စစ်တမ်းကောက်ယူလိုခြင်း ဖြစ်ပါသည်။ သို့ဖြစ်ပါ၍ စစ်တမ်းမေးခွန်းလွှာပါ မေးခွန်းများကို ကူညီဖြေဆိုခြင်းဖြင့် ကူညီပေးပါရန် မေတ္တာ ရပ်ခံအပ်ပါသည်။ ဤစစ်တမ်းမေးခွန်း လွှာတွင် အပိုင်း (၅) ပိုင်းနှင့် မေးခွန်းပေါင်း (၅၀) ပါဝင်ပြီး မေးခွန်းအားလုံး ဖြေဆိုပေးရန် ဖြစ်ပါသည်။ ထိုသို့ဖြေဆိုရာတွင် မိမိတို့၏ သဘောတူညီမှု အဆင့် ကို သင့်လျော်သော လေးထောင့် အကွက်များထဲတွင် အမှန် အမှတ်အသားခြစ်၍ ဖော်ပြပေးရန် ဖြစ်ပါသည်။ ပါဝင်ဖြေဆိုပေးကြသူ တစ်ဦးချင်းစီအား လှိုက်လှိုက်လှဲလှဲ ကျေးဇူးတင်ရှိပါကြောင်း ပြောကြားလိုပါသည်။

အောက်ဖော်ပြပါ မေးခွန်းများ၏ လေးထောင့်အကွက်ထဲတွင် မိမိသဘောတူညီသည့် အဆင့် အလိုက် အမှန်အမှတ်သားခြစ် ( $\sqrt{}$ ) ပါ။

<u>ယခုစစ်တမ်းမေးခွန်းလွှာပါ "ဆေးခန်း" ဟူသည့် စကားရပ်သည် "မိမိတို့ သွားရောက် ပြသနေကျ</u> <u>ဆေး ခန်း" ကို ဆိုလိုခြင်း ဖြစ်ပါသည်။</u>

အပိုင်း (၁) ယျေဘုယျ မေးခွန်းများ

အကြောင်းအရာ	အသေးစိတ်အချက်အလက်
၁။ လိင်အမျိုးအစား	🗆 ကျား
	□ ⊌
၂။ အသက်	🗆 ၂၀ နှစ်နှင့် အောက်
	🗆 ၂၀ - ၃၀ နှစ်
	🗆 ၃၁ - ၄၀ နှစ်
	🗆 ၄၁ - ၅၀ နှစ်
	🗆 ၅၀ နှစ် နှင့် အထက်
၃။ ပညာရေးအခြေအနေ	🗆 အထက်တန်းအောင် သို့မဟုတ်ယင်းထက်နိမ့်သော
	🗆 တက္ကသိုလ် ပထမဘွဲ့
	🗆 မဟာဘွဲ့နှင့် အထက်
၄။ လစဉ် ဝင်ငွေ	🛘 ၂၅၀,၀၀၀ ကျပ် ထက်နည်းသော
	🗆 ၂၅၀,၀၀၁ - ၅၀၀,၀၀၀ ကျပ်
	🗆 ၅၀၀,၀၀၁ - ၈၀၀,၀၀၀ ကျပ်
	🗆 ၈၀၀,၀၀၁ ကျပ် နှင့် အထက်
၅။ နေရပ်	🗆 ရန်ကုန်
	🗆 မန္တလေး
	🗆 နေပြည်တော်
	🗆 အခြား၊ ရှိပါက
၆။ တစ်နှစ်အတွင်း ဆေးခန်းသွားပြ	🗆 တစ်ကြိမ် နှင့် အောက်
ခဲ့သည့် အကြိမ် အရေအတွက်	🗆 နှစ်ကြိမ်

	🗆 သုံးကြိမ်
	🗆 လေးကြိမ်
	🗆 လေးကြိမ်နှင့်အထက်
၇။ တစ်ကြိမ်သွားပြလျှင် ပျမ်းမျှ	🗆 ၃၀,၀၀၀ ကျပ်အောက်
မည်မျှ ငွေ ရှင်းရပါသနည်း။	$\square$ ၃၀,၀၀၀ - ၅၀,၀၀၀ ကျပ်
	🗆 ၅၀,၀၀၁ - ၁၀၀,၀၀၀ ကျပ်
	🗆 ၁၀၀,၀၀၁ ကျပ် - ၃၀၀,၀၀၀ ကျပ်
	🗆 ၃၀၀,၀၀၁ ကျပ် - ၅၀၀,၀၀၀ ကျပ်
	🗆 ၅၀၀,၀၀၀ ကျပ်နှင့် အထက်
၈။ ဆေးခန်အား မည်ကဲ့သို့ သိရှိ	🗆 ရန်ကုန်လမ်းညွှန်စာအုပ်
ပါသနည်း။	🗆 ဆေးခန်းလမ်းညွှန်စာအုပ်
	🗆 လမ်းဘေးကြော်ငြာ ဆိုင်းဘုတ်ကြီး
	🗆 သူငယ်ချင်း/ မိသားစုဝင်များ၏ အကြံပြု
	ထောက်ခံချက်
	🗆 လူမှုကွန်ယက်စာမျက်နှာ Facebook
	🗆 အခြား၊ ရှိပါက
၉။ ဆေးခန်းတွင် မည်သည့် ကုသမှု	🗆 ပုံမှန်ခံတွင်း စစ်ဆေးခြင်းနှင့် ခံတွင်းသန့်ရှင်းရေး
မျိုးကို ပုံမှန်ရယူလေ့ ရှိပါသနည်။	🗆 သွားပေါက်ဖာထေးခြင်း
	🗆 သွားနုတ်ခြင်း
	🗆 သွားအတုစိုက်ခြင်း
	🗆 သွားဖြူရန် ဆေးချွတ်ခြင်း
	🗆 သွားညှိကုခြင်း
	🗆 အခြား၊ ရှိပါက

အောက်ဖော်ပြပါ အချက်အလက်များကို အဆင့် (၅) ဆင့် သတ်မှတ်၍ တိုင်းတာထားပါသည်။ အချက်အလက် တစ်ခုချင်းစီအပေါ် သဘောတူညီခြင်း သို့မဟုတ် သဘောမတူညီခြင်း အဆင့်များကို သတ်မှတ်ရာတွင် (၅) လုံးဝ သဘောတူပါသည်၊ (၄) သဘော တူပါသည်၊ (၃) ကြားနေ၊ (၂) သဘော မတူပါ၊ (၁) လုံးဝ သဘောမတူပါ ဟူ၍ အမှန် အမှတ်သားခြစ် ( $\sqrt{}$ ) ဖြင့် ရွေးချယ်ပေးရန်ဖြစ်သည်။

<u>ယခုစစ်တမ်းမေးခွန်းလွှာပါ "ဆေးခန်း" ဟူသည့် စကားရပ်သည် "မိမိတို့ သွားရောက် ပြသနေကျ</u> ဆေးခန်း" ကို ဆိုလိုခြင်း ဖြစ်ပါသည်။

အပိုင်း (၂) သွားကျန်းမာရေး စောင့်ရှောက်ပြုစုခြင်း ဝန်ဆောင်မှု အရည်အသွေး

သွားကျန်းမာရေး စောင့်ရှောက်ပြုစုခြင်း ဝန်ဆောင်မှု အရည်အသွေး	တိုင်းတာခြင်း	၅	9	9	J	၁
ရုပ်ပိုင်းဆိုင်ရာ ဖွဲ့ စည်းတည်ဆောက်ပုံ ၁။	ဆေးခန်းတွင် ခေတ်မီ ပစ္စည်းကိရိယာများကို အသုံးပြုထားပါသည်။					
ال	ဆေးခန်းတွင် အမြင်အားဖြင့် စွဲဆောင်မှုရှိသည့် ဆေးခန်းသုံး အထာက်အကူပြုပစ္စည်း များကို ထားရှိပါသည်။					
SII	ဆေးခန်းသည် သန်ရှင်း စင်ကြယ်သည့် အသွင် အပြင် ရှိပါသည်။					
èш	ဆေးခန်းတွင် ပိုးသတ်ထားသည့် ကိရိယာများ ကို အသုံးပြု၍ ကုသမှုများကို ဆောင်ရွက်ပေး ပါသည်။					

သွားကျန်းမာရေး စောင့်ရှောက်ပြုစုခြင်း ဝန်ဆောင်မှု အရည်အသွေး	တိုင်းတာခြင်း	၅	9	9	J	0
၅။	ဆေးခန်းသည် အလွယ်တကူ အဆင်ပြေစွာ ရောက်ရှိနိုင်သည့် နေရာတွင် တည်ရှိ ပါသည်။					
<b>ဝန်ထမ်းဖွဲ့ စည်းပုံ</b> ၆။	ဆေးခန်းရှိ ဝန်ထမ်းများသည် ကောင်းမွန်စွာ ဝတ်စား ဆင်ယင်ထားပါသည်။					
ି ମା	ဆေးခန်းတွင် လုံလောက်သော သွားဆရာဝန် ရှိပါသည်။					
ରା	ဆေးခန်းရှိ သွားဆရာဝန်သည် ကောင်းသော နာမည် ဂုဏ်သတင်းရှိပါသည်။					
ကျွမ်းကျင်ပိုင်နိုင်မှု အရည်အသွေး <sup>၉။</sup>	ဆေးခန်းရှိ သွားဆရာဝန်သည် သန့်ရှင်းသပ် ရပ်သည့် အသွင်အပြင် ရှိပါသည်။					
IIOC	ကုသမှုခံယူစဉ် ဆေးခန်းမှ သွားဆရာဝန်သည် ဝေဒနာ သက်သာစေရန် ဆောင်ရွက်ပေးပါ သည်။					

သွားကျန်းမာရေး စောင့်ရှောက်ပြုစုခြင်း ဝန်ဆောင်မှု အရည်အသွေး	တိုင်းတာခြင်း	၅	9	9	J	0
SOII	ဆေးခန်းမှ သွားဆရာဝန်သည် သွားများကို စိတ် ဝင်တစား ကြည့်ရှု စစ်ဆေးပေးပါသည်။					
အပြန်အလှန်ဆက်ဆံမှု						
၁၂။	ဆေးခန်းမှ သွားဆရာဝန်သည် ခံတွင်း ကျန်းမာ ရေး ညွှန်ကြာမှုများ ပေးရာတွင် ယုံကြည်စိတ်ချ ရပါသည်။					
၁၃။	ဆေးခန်းရှိ ဝန်ထမ်းများသည် ယဉ်ကျေးပျူဌာစွာ ဆက်ဆံကြပါသည်။					
၁၄။	ဆေးခန်းမှ သွားဆရာဝန်သည် ဆေးစစ်ချက်နှင့် ကုသမှုကို အသေးစိတ် ရှင်းပြပေးပါသည်။					
၁၅။	ဆေးခန်းရှိ သွားဆရာဝန်သည် လူနာ၏ မေးမြန်း ချက်များနှင့် ပူပန်မှုများအပေါ် စိတ်ဝင်တစား ရှိပါသည်။					
တုန့်ပြန်မှု အခြေအနေ						
၁၆॥	ဆေးခန်းဝန်ထမ်းများနှင့် သွားဆရာဝန်တို့သည် လူနာများ အပေါ်တွင် လျင်မြန်စွာ ဝန်ဆောင်မှု ဆောင်ရွက်ပေးပါသည်။					

သွားကျန်းမာရေး စောင့်ရှောက်ပြုစုခြင်း ဝန်ဆောင်မှု အရည်အသွေး	တိုင်းတာခြင်း	၅	9	9	J	၁
၁၇။	ဆေးခန်းရှိ ဝန်ထမ်းများသည် လူနာများ၏ အခက်အခဲများအပေါ်တွင် စာနာသော သဘော ထားကို ပြသကြပါသည်။					
ວຄ။	လူနာများ၏ မကျေနပ်မှုများကို ဆေးခန်းမှ ထိထိရောက်ရောက် ကိုင်တွယ် ဖြေရှင်းပေးပါ သည်။					
၁၉။	ဆေးခန်းရှိ ဝန်ထမ်းများနှင့် သွားဆရာဝန်များ တွင် ကောင်းမွန်သော ဝန်ဆောင်မှု ပေးနိုင်ရန် ဆန္ဒ ရှိကြပါသည်။					
စီမံခန့်ခွဲမှုအခြေအနေ						
JOII	သွားဆရာဝန်မှ လူနာများအား အချိန်တိကျစွာ လက်ခံ တွေ့ဆုံပါသည်။					
JOII	ဆေးခန်းသည် လူနာများ၏ ဖြစ်စေချင်သော ဆန္ဒကို အလေးထား တောင်းခံပါသည်။					
JJII	ဆေးခန်း ရက်ချိန်းယူရန် လွယ်ကူပါသည်။					
J?II	ကျသင့်ငွေ စာရင်းကို ဆေးခန်းမှ ရှင်းလင်းပြတ် သားစွာ ဖော်ပြပေးပါသည်။					

သွားကျန်းမာရေး စောင့်ရှောက်ပြုစုခြင်း ဝန်ဆောင်မှု အရည်အသွေး	တိုင်းတာခြင်း	၅	9	9	J	0
<b>ဝန်ဆောင်မှု၏</b> အကျိုးရလဒ် <sup>၂၄။</sup>	ကုသမှုအပြီးတွင် မိမိသည် ဝေဒနာသက်သာမှု ကို ခံစားရရှိပါသည်။					
၂၅။	ကုသမှု အပြီးတွင် မိမိကိုယ်မိမိ ယုံကြည်မှု ပိုမို ရရှိပါသည်။					
JGII	ဆေဆန်းမှ ဆောင်ရွက်ပေးသော သွားကျန်းမာအရး ဝန်ဆောင်မှုများအတွက် ပေးရသည့် ဝန်ဆောင် ခကို ကျေနပ် လက်ခံနိုင်ပါသည်။					

# အပိုင်း (၃) လူနာစိတ်ကျေနပ်မှု

လူနာစိတ်ကျေနပ်မှု	တိုင်းတာခြင်း	၅	9	9	J	၁
SII	ဆေးခန်းမှ ဆောင်ရွက်ပေးသည့် သွားကျန်းမာ ရေး ဝန်ဆောင်မှုများကို ရယူရန် ရွေးချယ်ခဲ့သည့် မိမိ၏ ဆုံးဖြတ်ချက်အပေါ် ကျေနပ်အားရပါသည်။					
اال	မိမိသည် ဆေးခန်းမှ သွားဆရာဝန်၏ ကျွမ်းကျင် မှု အရည်အချင်းအပေါ်တွင် ကျေနပ်အားရပါသည်။					
રાા	ဆေးခန်း၏ ဝန်ဆောင်မှုများသည် မိမိ မျှော်မှန်း ထားသည်နှင့် လုံးဝ ထပ်တူကျပါသည်။					
9II	ယေဘုယျအားဖြင့် မိမိသည် ဆေးခန်း၏ ဝန် ဆောင်မှုများအပေါ်တွင် အားရကျေနပ်ပါ သည်။					
၅။	မိမိသည် ဆေးခန်း၏ ဝန်ဆောင်မှု ရယူခြင်းအား ဖြင့် ကောင်းမွန်သော အတွေ့အကြုံ ခံစားရရှိပါ သည်။					

# အပိုင်း (၄) ယုံကြည်မှု

ယုံကြည်မှု	တိုင်းတာခြင်း	၅	9	9	J	ဂ
)II	ဆေးခန်းမှ သွားကျန်းမာရေး ဝန်ဆောင်မှုများကို ရယူသော အခါ မိမိသည် လုံခြုံစိတ်ချမှုကို ခံစားရရှိပါသည်။					
JII	မိမိသည် ဆေးခန်းမှ သွားဆရာဝန်အပေါ်တွင် ယုံကြည် စိတ်ချမှု ရှိပါသည်။					
ယုံကြည်မှု	တိုင်းတာခြင်း	၅	9	۶	J	o
<b>⊱</b> ∥	ဆေးခန်းမှ ဆောင်ရွက်ပေးသော ဝန်ဆောင်မှုများသည် စိတ်ချရပါသည်။					
ŞII	ဆေးခန်းသည် မိမိအပေါ်တွင် ရိုးသားမှန်ကန်စွာ ပြုမူ ဆက်ဆံပါသည်။					
၅။	ဆေးခန်းမှ ဆောင်ရွက်ပေးသော ဝန်ဆောင်မှုများ အပေါ်တွင် မိမိကိုယ်မိမိ စိတ်ချယုံကြည်မှု အပြည့်အဝ ခံစားရရှိပါသည်။					

# အပိုင်း (၅) သစ္စာမြဲခြင်း

သစ္စာမြဲခြင်း	တိုင်းတာခြင်း	၅	9	२	J	၁
OII	မိမိသည် ဆေးခန်းမှ ဆောင်ရွက်ပေးသော ဝန်ဆောင် မှုများကို ဆက်လက် ရယူသွားမည့်သူအဖြစ် ရည် ရွယ်ထားပါသည်။					
ال	မိမိသည် သူငယ်ချင်းများနှင့် ဆွေမျိုးများအား ဆေးခန်းမှ ဆောင်ရွက်ပေးသော ဝန်ဆောင်မှုများ ကို ရယူကြရန် အကြုံပြု ထောက်ခံပေးသွားပါမည်။					
श	မိမိသည် ဆေးခန်း၏ ကောင်းမွန်သော ဝန်ဆောင်မှု အခြေအနေများကို အခြားသူများအား ပြောပြသွား ပါမည်။					
ŞII	မိမိသည် သွားကျန်းမာရေး ဝန်ဆောင်မှုများကို ရယူရန် စိတ်ကူးသည့်အခါတိုင်း သွားနေကျ ဆေးခန်း၏ ဝန်ဆောင်မှုများကိုသာ အစဉ်ရယူ သွားရန် ဆုံးဖြတ်ထားပါသည်။					
သစ္စာမြဲခြင်း	တိုင်းတာခြင်း	၅	9	9	J	o
၅။	မိမိသည် ဆေးခန်း၏ ဝန်ဆောင်မှုများအပေါ်တွင် သစ္စာမြဲရန် ခံယူထားပါသည်။					

အခြားအကြံပြုလိုသည်များ ရှိပါက	
အချိန်ပေး၍ ပါဝင်ဖြေဆိုမှအတွက် ကျေးဇူးအထူးတင်ရှိပါသည်။	

# **APPENDIX (III): Data Analysis**

Hypothesis 1: Service quality of dental care has positive influence on patient satisfaction

**Descriptive Statistics** 

	Mean	Std. Deviation	N
sat_quality	3.8665	.75277	430
stru_quality	3.8762	.69206	430
proc_quality	3.8764	.69537	430
out_quality	3.9488	.77347	430

#### Correlations

		sat_quality	stru_quality	proc_quality	out_quality
Pearson Correlation	sat_quality	1.000	.783	.871	.853
	stru_quality	.783	1.000	.851	.772
	proc_quality	.871	.851	1.000	.853
	out_quality	.853	.772	.853	1.000
Sig. (1-tailed)	sat_quality		.000	.000	.000
	stru_quality	.000		.000	.000
	proc_quality	.000	.000		.000
	out_quality	.000	.000	.000	
N	sat_quality	430	430	430	430
	stru_quality	430	430	430	430
	proc_quality	430	430	430	430
	out_quality	430	430	430	430

# Variables Entered/Removed<sup>a</sup>

Model	Variables Entered	Variables Removed	Method
1	out_quality, stru_quality, proc_quality <sup>b</sup>		Enter

- a. Dependent Variable: sat\_qualityb. All requested variables entered.

**Model Summary** 

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.897ª	.805	.804	.33318

a. Predictors: (Constant), out\_quality, stru\_quality, proc\_quality

#### **ANOVA**<sup>a</sup>

Mode	el	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	195.808	3	65.269	587.965	.000b
	Residual	47.290	426	.111		
	Total	243.098	429		u.	

a. Dependent Variable: sat\_quality

b. Predictors: (Constant), out\_quality, stru\_quality, proc\_quality

#### Coefficients<sup>a</sup>

	Unstandardized Coefficients		Standardized Coefficients			Collinea Statistic	,
Model B		Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	.054	.095		.564	.573		
stru_quality	.091	.045	.084	2.036	.042	.268	3.729
proc_quality	.507	.054	.468	9.296	.000	.180	5.548
out_quality	.379	.040	.389	9.355	.000	.264	3.787

a. Dependent Variable: sat\_quality

Collinearity Diagnostics<sup>a</sup>

-				Variance Proportions			
Model	Dimension	Eigenvalue	Condition Index	(Constant)	stru_quality	proc_quality	out_quality
1	1	3.966	1.000	.00	.00	.00	.00
	2	.022	13.369	.95	.02	.02	.06
	3	.008	22.818	.04	.55	.01	.61
	4	.004	32.144	.00	.44	.98	.33

a. Dependent Variable: sat\_quality

Hypothesis 2: Patient satisfaction has positive influence on loyalty

**Descriptive Statistics** 

	Mean	Std. Deviation	N
lol_sat	3.8349	.81569	430
sat	3.8665	.75277	430

Correlations

00.1010.10							
		lol_sat	sat				
Pearson Correlation	lol_sat	1.000	.847				
	sat	.847	1.000				
Sig. (1-tailed)	lol_sat		.000				
	sat	.000					
N	lol_sat	430	430				
	sat	430	430				

Variables Entered/Removed<sup>a</sup>

	Variables	Variables	
Model	Entered	Removed	Method
1	sat <sup>b</sup>		Enter

a. Dependent Variable: lol\_sat

**Model Summary** 

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.847ª	.718	.718	.43349

a. Predictors: (Constant), sat

115

b. All requested variables entered.

# **ANOVA**<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	205.009	1	205.009	1090.958	.000b
	Residual	80.428	428	.188		
	Total	285.437	429			

a. Dependent Variable: lol\_satb. Predictors: (Constant), sat

# Coefficients<sup>a</sup>

	Unstandardized Coefficients		Standardized Coefficients			Collinea Statistic	,
Model	В	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	.284	.110		2.595	.010		
sat	.918	.028	.847	33.030	.000	1.000	1.000

a. Dependent Variable: lol\_sat

Collinearity Diagnostics<sup>a</sup>

	-			Variance Proportions	
Model	Dimension	Eigenvalue	Condition Index	(Constant)	sat
1	1	1.982	1.000	.01	.01
	2	.018	10.381	.99	.99

a. Dependent Variable: lol\_sat

Hypothesis 3: Service quality of dental care has positive influence on trust

**Descriptive Statistics** 

	Mean	Std. Deviation	N
tru_quality	3.9288	.75704	430
stru_quality	3.8762	.69206	430
proc_quality	3.8764	.69537	430
out_quality	3.9488	.77347	430

# Correlations

		tru_quality	stru_quality	proc_quality	out_quality
Pearson Correlation	tru_quality	1.000	.777	.852	.829
	stru_quality	.777	1.000	.851	.772
	proc_quality	.852	.851	1.000	.853
	out_quality	.829	.772	.853	1.000
Sig. (1-tailed)	tru_quality		.000	.000	.000
	stru_quality	.000		.000	.000
	proc_quality	.000	.000		.000
	out_quality	.000	.000	.000	
N	tru_quality	430	430	430	430
	stru_quality	430	430	430	430
	proc_quality	430	430	430	430
	out_quality	430	430	430	430

#### Variables Entered/Removeda

Model	Variables Entered	Variables Removed	Method
1	out_quality, stru_quality, proc_quality <sup>b</sup>		Enter

a. Dependent Variable: tru\_quality

**Model Summary** 

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.877a	.769	.767	.36544

a. Predictors: (Constant), out\_quality, stru\_quality, proc\_quality

# **ANOVA**<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	188.970	3	62.990	471.661	.000b
	Residual	56.892	426	.134		
	Total	245.862	429			

a. Dependent Variable: tru\_quality

#### Coefficients<sup>a</sup>

	Unstandardized Coefficients		Standardized Coefficients			Collinea Statistic	,
Model	В	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	.155	.104		1.492	.137		
stru_quality	.144	.049	.131	2.918	.004	.268	3.729
proc_quality	.478	.060	.439	7.994	.000	.180	5.548
out_quality	.346	.044	.353	7.783	.000	.264	3.787

a. Dependent Variable: tru\_quality

Collinearity Diagnostics<sup>a</sup>

-	- Commounty				Diag.iootio				
						Variance Proportions			
	Model	Dimension	Eigenvalue	Condition Index	(Constant)	stru_quality	proc_quality	out_quality	
	1	1	3.966	1.000	.00	.00	.00	.00	
		2	.022	13.369	.95	.02	.02	.06	
		3	.008	22.818	.04	.55	.01	.61	
		4	.004	32.144	.00	.44	.98	.33	

a. Dependent Variable: tru\_quality

b. All requested variables entered.

b. Predictors: (Constant), out\_quality, stru\_quality, proc\_quality

# Hypothesis 4: Trust has positive influence on loyalty

**Descriptive Statistics** 

	Mean	Std. Deviation	N
lol_tru	3.8349	.81569	430
tru	3.9288	.75704	430

Correlations

		lol_tru	tru
Pearson Correlation	lol_tru	1.000	.875
	tru	.875	1.000
Sig. (1-tailed)	lol_tru		.000
	tru	.000	
N	lol_tru	430	430
	tru	430	430

Variables Entered/Removed<sup>a</sup>

	Variables	Variables	
Model	Entered	Removed	Method
1	tru <sup>b</sup>		Enter

a. Dependent Variable: lol\_tru

b. All requested variables entered.

**Model Summary** 

			Adjusted R	Std. Error of the
Model	R	R Square	Square	Estimate
1	.875ª	.765	.764	.39586

a. Predictors: (Constant), tru

**ANOVA**<sup>a</sup>

Mod	el	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	218.367	1	218.367	1393.502	.000b
	Residual	67.069	428	.157		
	Total	285.437	429			

a. Dependent Variable: lol\_tru

b. Predictors: (Constant), tru

Coefficientsa

	Unstandardized Coefficients		Standardized Coefficients			Collinea Statistic	,
Model	В	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	.132	.101		1.309	.191		
tru	.942	.025	.875	37.330	.000	1.000	1.000

a. Dependent Variable: lol\_tru

Collinearity Diagnostics<sup>a</sup>

_	-			Variance Proportions	
Model	Dimension	Eigenvalue	Condition Index	(Constant)	tru
1	1	1.982	1.000	.01	.01
	2	.018	10.487	.99	.99

a. Dependent Variable: lol\_tru

Hypothesis 5: Service quality of dental care has positive influence on loyalty

**Descriptive Statistics** 

2000							
	Mean	Std. Deviation	N				
lol_quality	3.8349	.81569	430				
stru_quality	3.8762	.69206	430				
proc_quality	3.8764	.69537	430				
out_quality	3.9488	.77347	430				

#### Correlations

		lol_quality	stru_quality	proc_quality	out_quality
Pearson Correlation	lol_quality	1.000	.752	.818	.804
	stru_quality	.752	1.000	.851	.772
	proc_quality	.818	.851	1.000	.853
	out_quality	.804	.772	.853	1.000
Sig. (1-tailed)	lol_quality		.000	.000	.000
	stru_quality	.000		.000	.000
	proc_quality	.000	.000		.000
	out_quality	.000	.000	.000	
N	lol_quality	430	430	430	430
	stru_quality	430	430	430	430
	proc_quality	430	430	430	430
	out_quality	430	430	430	430

# Variables Entered/Removed<sup>a</sup>

Model	Variables Entered	Variables Removed	Method
1	out_quality, stru_quality, proc_quality <sup>b</sup>		Enter

a. Dependent Variable: lol\_quality

**Model Summary** 

			Adjusted R	Std. Error of the
Model	R	R Square	Square	Estimate
1	.846ª	.716	.714	.43638

a. Predictors: (Constant), out\_quality, stru\_quality, proc\_quality

b. All requested variables entered.

#### **ANOVA**<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	204.314	3	68.105	357.639	.000b
	Residual	81.123	426	.190		
	Total	285.437	429			

a. Dependent Variable: lol\_quality

# Coefficients<sup>a</sup>

	Unstandardized Coefficients		Standardized Coefficients			Collinea Statistic	,
Model	В	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	088	.124		707	.480		
stru_quality	.170	.059	.144	2.896	.004	.268	3.729
proc_quality	.446	.071	.380	6.252	.000	.180	5.548
out_quality	.388	.053	.368	7.324	.000	.264	3.787

a. Dependent Variable: lol\_quality

Collinearity Diagnostics<sup>a</sup>

				Variance Proportions			
Model	Dimension	Eigenvalue	Condition Index	(Constant)	stru_quality	proc_quality	out_quality
1	1	3.966	1.000	.00	.00	.00	.00
	2	.022	13.369	.95	.02	.02	.06
	3	.008	22.818	.04	.55	.01	.61
	4	.004	32.144	.00	.44	.98	.33

a. Dependent Variable: lol\_quality

Hypothesis 6: Service quality of dental care, patient satisfaction and trust have positive influence on loyalty

**Descriptive Statistics** 

Decempent of canonico						
	Mean	Std. Deviation	N			
lol_quality	3.8349	.81569	430			
Service_Quality	3.8847	.67090	430			
sat_quality	3.8665	.75277	430			
tru_quality	3.9288	.75704	430			

b. Predictors: (Constant), out\_quality, stru\_quality, proc\_quality

#### Correlations

		lol_quality	Service_Quality	sat_quality	tru_quality
Pearson Correlation	lol_quality	1.000	.835	.847	.875
	Service_Quality	.835	1.000	.883	.866
	sat_quality	.847	.883	1.000	.889
	tru_quality	.875	.866	.889	1.000
Sig. (1-tailed)	lol_quality		.000	.000	.000
	Service_Quality	.000		.000	.000
	sat_quality	.000	.000		.000
	tru_quality	.000	.000	.000	
N	lol_quality	430	430	430	430
	Service_Quality	430	430	430	430
	sat_quality	430	430	430	430
	tru_quality	430	430	430	430

#### Variables Entered/Removed<sup>a</sup>

Model	Variables Entered	Variables Removed	Method
1	tru_quality, Service_Quality, sat_quality <sup>b</sup>		Enter

- a. Dependent Variable: lol\_quality
- b. All requested variables entered.

**Model Summary** 

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.892a	.796	.795	.36933

a. Predictors: (Constant), tru\_quality, Service\_Quality, sat\_quality

# **ANOVA**<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	227.327	3	75.776	555.513	.000b
	Residual	58.109	426	.136		
	Total	285.437	429			

- a. Dependent Variable: lol\_quality
- b. Predictors: (Constant), tru\_quality, Service\_Quality, sat\_quality

#### Coefficients<sup>a</sup>

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics							
Model	В	Std. Error	Beta	t	Sig.	Tolerance	VIF						
1 (Constant)	182	.105		- 1.731	.084								
Service_Quality	.254	.061	.209	4.150	.000	.189	5.295						
sat_quality	.239	.060	.221	4.015	.000	.158	6.317						
tru_quality	.536	.056	.498	9.634	.000	.179	5.582						

a. Dependent Variable: lol\_quality

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Collinearity Diagnostics<sup>a</sup>

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		_			Variance Proportions					
Ν	/lodel	Dimension	Eigenvalue	Condition Index	(Constant)	Service_Quality	sat_quality	tru_quality		
1		1	3.968	1.000	.00	.00	.00	.00		
		2	.024	12.931	.90	.01	.03	.03		
		3	.004	30.431	.04	.44	.08	.87		
		4	.004	32.846	.07	.55	.89	.10		

a. Dependent Variable: lol\_quality